ALFRED BADER Subject Files Clippings

QUEEN'S UNIVERSITY ARCHIVES
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BOX 9
FILE 15

CHEMICAL FIRMS GROWTH CONTINUES

Aldrich Firing Up All Burners

Aldrich Chemical Co. President Alfred R. Bader (left) and Bernard E. Edelstein, executive vice president, inspected storage facilities containing some 8,000 stocked and analyzed chemicals produced and distributed by the Milwaukee-based manufacturing firm which has emerged as a leader in the chemicals industry. The company has tripled its production and storage space in the US over the past six months and is reporting continued growth. —Sentinel Photo

By RAY KENNEY
Business News Editor

When the Harvard University Graduate School of Business Administration recently surveyed research companies across the US to determine the outstanding supplier of chemicals, the answer came back loud and clear:

Aldrich Chemical Co., Milwaukee.

"The three criteria for supplier selection most often cited were availability of catalog listings, quality and purity, and price," a Harvard spokesman reported to companies responding to the survey. "Aldrich had the highest rating in all of these categories of any organics supplier. . . . The researcher appears to be the primary decision maker on supplier rather than the purchasing agent where one exists," he added.

* * *

Something always is cooking at Aldrich, the 23 year old supplier of organic chemicals and other products for government, universities, medical research institutes and private industry, headquartered at 940 W. St. Paul Ave.

The expanding company has been operating on all burners since it was founded by Alfred R. Bader, a Harvard Ph.D., and an associate, in 1951.

Hefty Catalogs

The firm, which launched operations in a $25 a month garage on N. Farwell Ave., is tripling its operating space this year and presently is preparing to distribute 150,000 hefty product catalogs in the US and Europe.

The 1,200-page catalog and handbook of organic and biochemicals lists 8,000 different chemical compounds and products, explains their properties, and even suggests disposal methods.

Those are the products stocked, analyzed and ready for shipment out of Milwaukee; the East Coast Service and Distribution Center at Cedar Knolls, N. J.; The West Coast Service and Distribution Center in San Leandro, Calif., or the Southern Service and Distribution Center in Atlanta, Ga.

The company also operates facilities in Great Britain, West Germany and Belgium.

Another 10,000 products are listed in a supplementary catalog of library stock — rare research chemicals still be screened in research and development laboratories for applications and normally ordered in smaller quantities.

Growth Reported

"We're basically a mail order business," explains Ber-

know WISCONSIN industry

nard E. Edelstein, executive vice president.

And business has been very good, he might have added.

Profits topped the $1 million mark last year as revenues rose to $8,584,000. The $1,015,000 income figure equaled $1.51 on each of the 674,760 shares outstanding.

Volume is running at a record rate this year, according to Bader, who is looking for sales of between $10 million and $11 million. During the first half of the current year, the company reported a 35% jump in profits from the middle of 1973, to $644,080, or 95 cents a share. Revenues were running 34% ahead of a year ago, at $5,404,526.

To meet the expanding demand for the company's growing list of chemical compounds, Aldrich has purchased a 35,000 square foot warehouse in Metuchen, N. J. (about 50% of the company's sales are along the Eastern Seaboard, Bader points out), which will replace the Cedar Knolls facility. The new unit is about three times the size of the old one, the founder and president points out.

Buildings Added Here

The company also is in the process of tripling its space here. Aldrich has purchased 110,000 square feet of additional plant and storage space in a two building complex at 230 S. Muskego Ave., about a half mile south and slightly west of the present plant.

The relocation of some operations and the expansion of storage facilities already is underway, said Irwin Klundt, vice president in charge of technical services.

The company also is surveying the industrial scene in Japan with an eye toward operations there, the officers point out.

All of the growth has been financed internally, according to Bader, who started the company with a pair of $250 investments 23 years ago.

(The name Aldrich was selected after Bader and his partner at the time, Atty. Jack Eisendrath, flipped a coin.

("He was going with a girl named Aldrich and I was going with a girl named Daniels, and he won. So it was Aldrich," the founder recalls. Bader purchased the attorney's interest in the company in 1955.)

Art Identification

The name Aldrich since has become synonymous with high quality chemicals. Because Bader is a patron of art, the company uses color reproductions of art masterpieces on the cover of its annual reports to shareowers and its widely circulated catalogs. The practice has become so identified with Aldrich as a symbol of quality that it no longer is necessary to use the Aldrich name on the front of the catalogs, Bader notes with pride.

He is equally proud of the company's financial condition.

"There is not a dollar of debt," he points out.

An investment magazine recently listed the 100 largest companies in Wisconsin on the basis of sales, and noted the profitability of each of the firms in terms of return on sales, Bader also points out. Aldrich just missed inclusion in the list, but its profitability — in the neighborhood of 12.5% — would have moved the company to the very top of that list, ahead of the Fort Howard Paper Co., which reported an 11.89% return on each sales dollar.

In-House Training

"We've never had a bank loan in the United States (an exception had to be made in West Germany) and we've never had a mortgage," said the man who is the largest private employer of chemists in the state and one of the largest in the nation.

At the present time, there are 20 Ph.Ds on the staff and all employes are engaged in a continuous in-house training program conducted by the company. The Aldrich library of chemical references and periodicals is among the largest in the industry.

Staff members and the company are major contributors to industrial journals and the catalog traditionally is a widely-used reference work in itself.

Bader, who received his Ph.D. in chemistry at Harvard, was a research chemist and a group leader in charge of organic research at the Pittsburgh Plate Glass Co. here until PPG transferred R&D efforts to Pennsylvania in 1954.

He truly liked it here, he says; was engaged to be married, was involved in a Sunday School program, and was teaching on a part time basis, so he decided to stay.

PPG Disinterest

He had suggested that PPG become involved in the manufacture and distribution of organic chemicals, but the big corporation expressed disinterest and Bader began limited activity on the side.

He served as chief chemist of the little company until he became its president in May of 1955.

The company went public in 1965 with the sale of 100,000 shares by the Marshall Co. — now a part of Harris, Upham & Co. — largely as a favor to research chemists around the country and to grant stock options to key personnel.

A secondary offering of 120,000 shares, managed by Robert W. Baird & Co., in 1967, broadened the ownership and set the stage for additional growth.

Aldrich has become a household — or laboratory — word since then.

It presently serves the pharmaceutical, agricultural, cosmetic, paint, photographic, plastic and printing industries (but is dependent on none of them, according to Edelstein).

The compounds are produced, purchased or manufactured by subcontractors, and the catalog list grows longer each time the manual is published.

Repelling the Insects

The company's products are used in a wide range of items ranging from insect repellents ("the best there is," says Bader) to defogging material for X-rays. Aldrich also does contractual research, mostly for the US Government, and is engaged in the search for anti-cancer agents in a wide assortment of chemicals.

Shortages? Orders are shipped to the leading research and industrial organizations in America within 24 to 36 hours after they are received, according to Edelstein, a chemist-lawyer who has supervised the extensive computerization of production, printing of catalogs.

That is a long way from the one page, typewritten "catalog" circulated by the company in 1951.

Framed, it hangs on the wall of Bader's office, close to a royalty check he received from the sale of a patent while still an employe of PPG. The amount: $1.

Company Note:

To assure total accuracy, we wish to note that Aldrich employs 12 Ph.D.'s, rather than 20, and is presently tripling its total warehousing space, not tripling its Milwaukee facilities.

JANUARY TOUR SPEAKERS

Akron, Upper Ohio Valley

DR. ALFRED R. BADER

Alfred R. Bader was born in Vienna, Austria on April 28, 1924. He began his higher education at Queen's U., Ontario, Canada, where he was awarded the following degrees: B.Sc., 1945; B.A., 1946; M.Sc., 1947. He then moved on to Harvard U. where he obtained his M.A. degree in 1949 and his Ph.D. degree in chemistry, 1950.

Dr. Bader joined the Pittsburg Plate Glass Co. in 1950 as a research chemist, and was promoted to group leader of organic research in 1953. He joined the Aldrich Chemical Co. (Milwaukee) in 1954 as chief chemist. Since 1955, Dr. Bader has been President of Aldrich.

Dr. Bader is a member of the Chemical Society (London) and the British Chemical Society. His research interest include fatty acids, quinones, reaction mechanisms, alkenylphenols, indoles. In addition, Dr. Bader is a collector of old master paintings and is quite knowledgeable of the chemistry of art.

"CHEMISTRY AND ART"

As a collector of old master paintings I look every year at several hundred old paintings — in junk and antique stores and at auctions all over the world — and have to decide, usually within minutes, whether a painting is worth buying. The first criteria is, of course, the general artistic merit of the work — often hard to discern in paintings covered with centuries of dirt. Secondly, is the painting really what I think it is. I am offered a painting said to be by a Dutch 17th century artist — are the pigments those used by 17th century artists? Are the wood or canvas and the ground those used by 17th century Dutch artists? Once I have acquired an old painting, the surface dirt is usually easily removed with mild solvents, and the decision has to be made how much restoration to do. Is the painting an original, a workshop production or a later copy? Is the painting in its original size? What is the condition of the support — be it canvas, wood, metal or slate? How much old restoration is there and should it be removed? Almost every old painting has some overpaint — was this added to hide losses or subjects considered undesirable by previous owners? If the painting is signed, is the signature original? The last questions can generally be answered by a combination of physical and chemical means, chiefly examination with uv light and under a magnifying glass, and tests with various solvents. Many specific examples will be given to illustrate these questions and their answers.

(Continued on Page 10)

The Whig-Standard

MAGAZINE

KINGSTON, ONTARIO
JANUARY 23, 1993

THE BADER COLLECTION

Kosher Szechuan, an article by Bruce Berman
Hooked, gaffed and netted by Reginald Hill, a book review by Mary Millar
A case of automotive anxiety, Hard Lines by Amy Friedman

ENTERTAINMENT CALENDAR

Whoopi Goldberg (left) and Leleti Khumalo in Sarafina, at the Capitol Theatres

Films

ALADDIN
Walt Disney's new animated treatment of the classic children's story features the voice of Robin Williams as the genie. At the **Capitol Theatres**.

ALIVE
Based on a real-life drama, a South American rugby team whose plane crashes in the Andes Mountains struggles to survive. Ethan Hawke stars. At the **Capitol Theatres**.

ASPEN EXTREME
Canadian Paul Gross stars as a ski instructor who gets a job in the playground of the rich and famous. At the **Capitol Theatres**.

BODY OF EVIDENCE
Madonna stars as a woman accused of using her sexual wiles to murder an older, wealthy lover. At the **Capitol Theatres**.

THE BODYGUARD
Kevin Costner stars as a security specialist hired to protect a pop diva (Whitney Houston) who has been receiving death threats. At the **Capitol Theatres**.

FOREVER YOUNG
Accidentally frozen for 52 years, a test pilot (Mel Gibson) awakes to search for the woman he loves (Isabel Glasser). At the **Capitol Theatres**.

STAR TREK I, II AND III
The first three of the Star Trek series can be seen for one price. Weekends only. At the **Capitol Theatres.**

SARAFINA
Whoopi Goldberg stars in this cinematic adaptation of the Broadway musical about South Africa. At the **Capitol Theatres**.

CHAPLIN
Robert Downey Jr. stars in this Richard Attenborough film about the little man with the funny walk and the turbulent personal life. At the **Cataraqui Cinemas**.

HEXED
A lying hotel clerk gets more than he bargained for when he hooks up with a murderous model. At the **Cataraqui Cinemas**.

HOME ALONE 2
The young boy abandoned in Home Alone (Macaulay Culkin) gets lost in New York, where he bumps into the bumbling bandits he encountered before. At the **Cataraqui Cinemas**.

NOWHERE TO RUN
Jean-Claude Van Damme stars as a fugitive who stops to help a single mother (Roseanne Arquette) and her family.

SCENT OF A WOMAN
An irascible blind man (Al Pacino) forms an uneasy friendship with a young man (Chris O'Donnell) who is his guide over the Thanksgiving weekend. At the **Cataraqui Cinemas**.

USED PEOPLE
Shirley MacLaine stars as a widow who is romanced by a mysterious foreigner (Marcello Mastroianni) on the very day of her husband's funeral. At the **Cataraqui Cinemas**.

PRINCESS COURT CINEMA

Tonight to Monday:

7 p.m. Johnny Stecchino (Italy, 1991) Roberto Benigni plays the dual role of a mobster who turns state evidence and a nerdy busdriver whose girlfriend plans to have bumped off.

9 p.m. The Public Eye (U.S., 1992). A crime photographer (Joe Pesci) gets involved with a nightclub owner having troubles with the mob.

Tuesday:

7 p.m. The Name Of The Rose(U.S., 1986) Sean Connery stars as a medieval monk trying to unravel murder and mayhem in a monastery.

9:30 p.m. Johnny Stecchino.

Wednesday:

7 p.m. Hiroshima Mon Amour (France/Japan, 1959) A Japanese man and French woman with painful pasts have an affair in postwar Hiroshima.

9 p.m. Johnny Stecchino.

Thursday:

7 p.m. Johnny Stecchino.

9 p.m. Independent Eyes: Early works by Canadian notables. Early short films by Don Shebib, Patricia Rozema, Bruce McDonald and others.

Friday and Saturday:

7 p.m. Tous Les Matins Du Monde (France, 1991). Gerard Depardieu stars in this film about the relationship between a musician and his student in 17th-century France.

9:15 p.m. Waterland (Great Britain, 1992). Jeremy Irons stars as a history teacher who divulges his family's lurid past to stir up interest in his bored class.

Art

AGNES ETHERINGTON ART CENTRE

Imaging Canada. Early topographic works, portraits, religious paintings and landscapes from the permanent collection. Ends tomorrow.

Douglas Walker: A Future In Ruins. Photo-related works and recent encased sculptures by the Brockville native. Ends tomorrow.

Liliana Berezowsky: Renewing the Web. Two recent large-scale sculptures by a Montreal artist. Until Feb. 21.

The Bader Gift. A selection of paintings donated by Alfred and Isabella Bader in the past year. Until March 21.

Points of View: Art from Western Sudan. Headdresses, masks and figures from the Justin and Elizabeth Lang collection. Until June 20.

Drawing a Fine Line: The British Etching Revival. Works by Brockhurst, Whistler, Haden, John and others. Until April 4.

The Coil That Binds, The Line That Bends. An environmental work in progress by Kingston native Pam Hall, who is Visiting Artist at Queen's University in February. Opens today. Until Feb. 21.

ARMCHAIR GENERAL BOOKSTORE
Aviation art by Don Connolly.

ART NOISE GALLERY
With Cupped Hands. Recent paintings by Veronica Desjardins. Until Jan. 30.

CATARAQUI CONSERVATION AREA
Millennium Project (Art For Earth's Sake), a sculptural installation.

CORNERSTONE GALLERY
Etchings by Franc van Oort. Until Feb. 7.

CREATIVE FRAMING
Paintings by Bruce Sherman. Until Jan. 31.

DORNBUSCH STUDIO
Dornbusch lampshades on new raku bases by Hanna Back.

GRAND THEATRE
(Baby Grand)
Abstracts by John Climenhage. Proceeds from sale will benefit Kingston AIDS Project. Until Jan. 31.

GREGORY'S RESTAURANT
Still Life (Primarily). Paintings by Shannon Brown. Until Jan. 28.

HOTEL BELVEDERE
Nocturne. Mixed-media works by Aida Sulcs McDonald on display in the hotel lounge. Until Jan. 31.

HORSE THIEF BAY STUDIO
(Rockport)
Show and sale by Thousand Islands artisans at Zena Berstein's studio, one mile east of Ivy Lea on the Thousand Islands Parkway near Rockport. By appointment at 659-2092.

HOTEL DIEU STUDENT GALLERY
Celebration of Color: Exhibition of 91 works by kindergarten to OAC students from five area school boards.

INTERNATIONAL HOCKEY HALL OF FAME
Fans, a collection of 39 ceramic faces by Joan Belch.

KINGSTON ARTISTS ASSOCIATION, INC.
Art For Earth's Sake. A documentary exhibition of videos, photographs, slides and artists' statements from the second year of The Millennium Project. Until Feb. 27.

KINGSTON PUBLIC LIBRARY
(Wilson Room)
The Hunters. Oil on canvas paintings by Jennifer Walton. Until Jan. 30.

PROFESSIONAL SKIN AND HAIR CARE CONSULTANTS
(115 Clarence St.)
Original silkscreen prints by Angela Costello.

RUNCIBLE SPOON CAFE
Watercolors and mixed-media works by Kristen Holmgren.

WATERCOLORS, ETC.
Watercolors and pottery by Shirley Miller and other Amherst Island artists. Third Concession, Amherst Island. (For directions, call 389-2588).

WHITESTONE HOUSE
(3760 Battersea Rd., Sunbury)
Landscape photography by Michael Collier. By appointment at 353-1351.

Music

BILL MADDOX
Belleville organist in recital at Grace United Church in Sydenham. Tonight at 8 p.m.

SYMPHONY PLAYERS
Principal players from the Kingston Symphony will present a concert of chamber music by Handel, Holst, Dvorak and others tonight at St. Mark's Church in Barriefield at 7:30 p.m.

LES MISTRALS
Chamber group in recital at Chalmers United Church. Tomorrow at 7:30 p.m.

EPIPHANY SERVICE
Children's choirs from St. George's Cathedral, Edith Rankin Church and Trinity United Church, Napanee combine for a recital service celebrating Epiphany. Tomorrow at St. George's at 5 p.m.

MUNCH TIME MUSIC
Kingston Symphony players in lunchtime concert. Friday at noon at Memorial Hall, City Hall.

Stage

FIDDLER ON THE ROOF
Queen's Musical Theatre production at the Grand Theatre. Performances tonight and next Thursday to Saturday. Curtain at 8 p.m.

FARNDALE MURDER MYSTERY
Domino Theatre presents the murdery comedy by David McGillivray and Walter Zerlin Jr. with the impossibly long name: The Farndale Avenue Housing Estate Townswomen's Guild Dramatic Society Murder Mystery. Performances tonight and Thursdays to Saturdays until Feb. 6. Curtain at 8 p.m.

GOPHER BAROQUE
Gopher Baroque Players present a family show called By The Sea. In the Baby Grand Theatre tomorrow. Showtimes 1 p.m. and 3 p.m.

Night Spots

AJ'S HANGAR
Tonight: Little Betty.
Sunday: Wild Blues Yonder.
Wednesday: Boag and the Graveyard Whips.
Thursday and Friday: One.
Next Saturday: The Bayou Boys and the Bogarts.

THE COCAMO
Wednesdays: Michael George and the Jive with JOYY.
Thursday: Rheostatics.

DUKE OF KINGSTON
Tonight: The Shine.
Thursday: The Bottom Dwellers.
Saturday: Georgette Fry.

HOWARD JOHNSON'S
(The Silver Saddle Saloon)
Tonight: Five Wheel Drive.
Thursday to Saturday: D.J. Hopson.

LONE STAR CAFE
Thursdays to Saturdays: Billy Bridger

PORTSMOUTH TAVERN
Thursday to Saturday: Brady and Gaylord.

STAGES
Tuesday: Moxy Fruvous.

SUNFLOWER RESTAURANT
Wednesdays: Allan Hope-Simpson.

TOUCAN
Tonight: Scatterbrains.
Monday: JOYY.

WELLINGTON
Tonight: Gerry O'Kane.
Tomorrow: Sweet Folk All.
Monday: RMC and Queen's Pipes and Drums and Gerry O'Kane.
Tuesday: Gerry O'Kane.
Thursday: The Wang Dang Doodle Dixie Band.
Friday: The Septembers.
Next Saturday: Visce Veatha.

Zorba's
Sundays: The Big Swing Band.

DALTON

LABORATORIES INC.

by *Susanne Hasulo*

When you start your own business, it's always nice to get advice from more experienced colleagues in the industry. Peter Pekos remembers the lessons he and his partner learned from Alfred Bader, a respected chemist and founder of the Aldrich Chemical Company, back in 1987 when their year-old company, Dalton Chemical Laboratories Inc., was still in its early stages. Pekos and his then-partner, Doug Butler, were slowly building their chemistry business making molecules and compounds. In an effort to grow their client base, they sent letters to the purchasing departments of all the catalogue houses hoping to find a company that would be interested in purchasing their chemical products.

"We never got any response," says Pekos, Dalton Chemicals' president. "And Alfred said, 'Well, they get hundreds of letters from all kinds of people. They don't know you. They don't know what you do. I go out and visit people and I see what they can do and I know when they are good chemists.'"

Pekos took those lessons about building business by developing relationships to heart. It's one of the things that has helped Dalton Chemical Labs go from fledgling start-up to being a service provider and problem solver for pharmaceutical and biotechnology companies across North America and around the world.

The company was formed at York University in 1986 with Pekos and Butler as principals. At the time, Pekos' research was focussed on the formation of small molecules that could be built like scaffolds, a forerunner to today's nanotechnology techniques. It wasn't, however, something that many were interested in at the time, so the partners investigated other ways to develop products and help commercialize them.

"We were making the odd molecule for Sick Kids; doing some metabolites for the paediatrics group down there and we started to get access to quoting on molecules that people wanted made," explains Pekos. "Usually they were smelly, difficult, impossible things people didn't want to do — that is the way companies like ours usually start. Fortunately, because of our skills as chemists, we were able to solve people's problems very early on and we started to get a bit of a reputation."

From the benign to the downright weird, the company tackled all sorts of chemical analysis and synthesis queries in those early days. "I sort of envisioned us as Larry, Darryl and Darryl on the Bob Newhart show. You know, anything for a buck. Whatever it was, if it was chemistry, if it was interesting, we would do it," Pekos says jokingly.

The team's chemical expertise and ability to handle difficult projects enabled the company to expand into other areas, including contract research and further development of its own chemical products. Today, Dalton Chemical Labs offers a wide range of products and services, including drug development, GMP synthesis, custom synthesis and analysis, diagnostics and natural products, with particular strengths in synthetic organic, analytical and biopolymer chemistry.

The company has enjoyed what Pekos calls "hockey stick" growth over the past few years, with close to 40 per cent year-over-year increases since 1996. With close to 50 employees, almost a third of the 30 technical staff are PhDs. More than 70 per cent of their business is in exports, and their client list includes Fortune 500 companies from around the world, including Japan, Korea, Europe, North and South America and the U.S. Pekos now heads the company with his new partner, his wife and fellow scientist, Dr. Natalie Lazarowych, Dalton's technical director.

Understanding the client's needs and continuously building that relationship has been the key to this growth, says Len Monheit, Dalton's commercial operations manager. It's all about "relationship establishment, understanding exactly what the objective of the project is. There are very few that are exactly similar. That is one of the things that we pride ourselves on, that we are quite flexible in the relationships that we develop and an understanding of the objectives which can be totally, totally different from time to time."

That fluid relationship between company and customer helps Dalton anticipate the ever-changing needs of its clients, whether it's work on a one-time project, shoring up the client's resources in the drug development process, manufacturing products for early stage clinical trials, or contract research, to name just a few.

As Dalton's business has grown, so has the need for a larger space. The new year will see the company move from its present labs and offices scattered around the York campus to a new, custom-renovated building located just a short distance down the road from its first home. The 42,000-square-foot facility is expected to be operational by March or April.

Pekos is excited as he displays the architectural drawings for the new building, which the company has chosen

Photo opposite page, top: Christopher Campbell; opposite bottom courtesy of Dalton Chemical Laboratories

to purchase instead of rent. "We are in the process of finalizing a $3 million renovation. The total project is worth about $5 million. It is going to integrate everything. Everything will come under one roof. We are putting in two GMP suites. We have a couple of synthetic labs and our analytical group is going to be there," he says, pointing to the plans. "It has the opportunities for us to grow. It will certainly meet our needs for the next two to five years. The suites that we have put in will in many ways be better than some of the big pharma companies that we are serving."

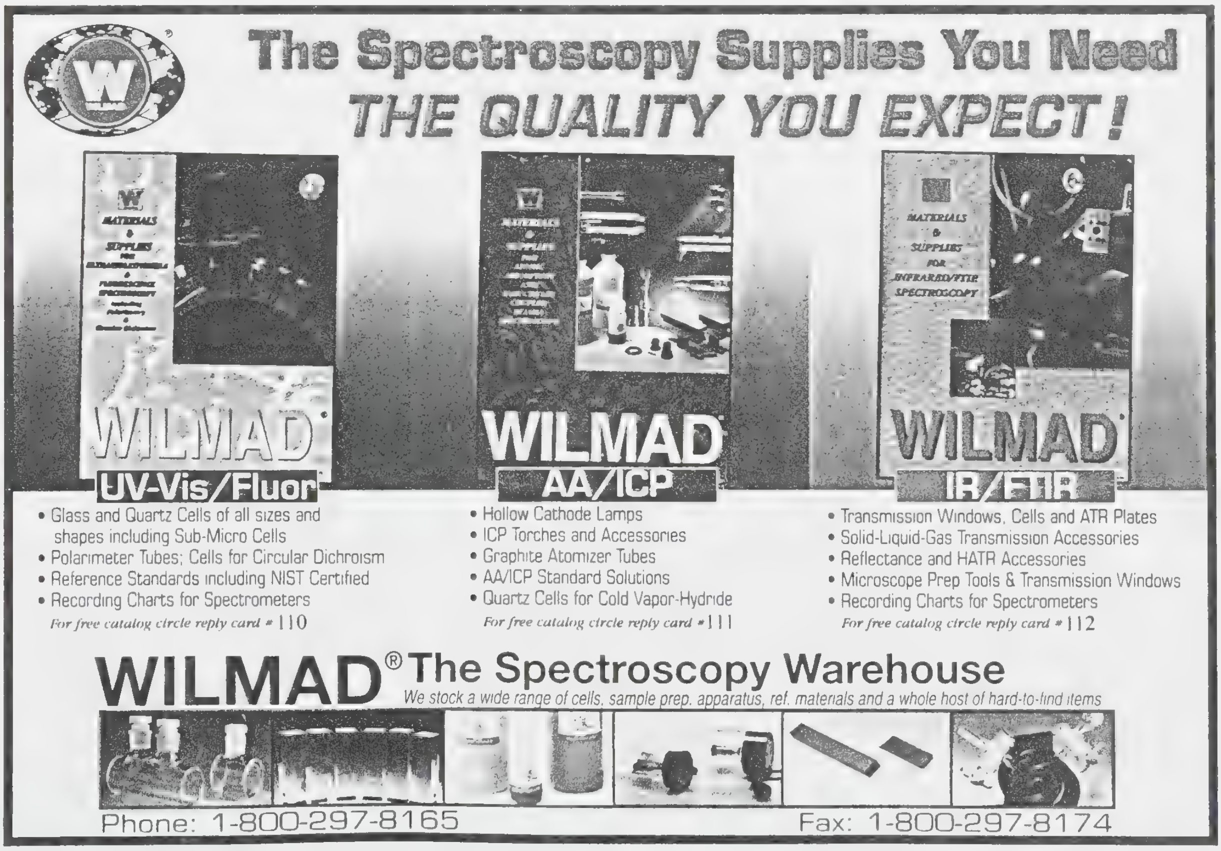
Juggling different client projects and adhering to multiple deadlines requires superb organizational skills and constant communication between all staff. That's why Pekos and Monheit both believe in continuous training for the company's employees, not just in technical and job-related skills but in soft skills such as professional and personal development. They've invited speakers and trainers to coach the staff on everything from speed reading to learning Stephen Covey's seven habits to leadership training. One of the company's goals is to have at least half of its staff in a training program on a weekly basis.

One of the benefits of this "internal" relationship building has been a sharp decrease in employee turnover, says Pekos. "Our retention of staff, which is a measure of our success in hiring, training and motivating, has shot up. That partly has to do with communication and our willingness to do more for our staff than some other companies might. We are really a collection of individuals and it is how we choose to work together that is going to make this company a successful company."

When it comes to knowledge based industries, it's the knowledge of the individuals and how they share that information as a group that makes a company stand out from its competitors. At Dalton, regular meetings and brainstorming sessions are a normal part of every work day. One of Monheit's goals when he first joined the company was to set up a daily scheduling process for the scientists. "Every single person, every single piece of equipment is now planned so that there is no question as to the utilization of the resources. There is no question as to the progress that we have made on certain projects. This adds a lot of value to the relationships that we have with our clients."

> "That is one of the things that we pride ourselves on. We are quite flexible in the relationships that we develop and an understanding of the objectives which can be totally, totally different from time to time."

Looks like Dalton has found the winning formula for both its chemical products and services and its clients.



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situation. The term could end earlier should the incumbent return.

Major Responsibilities: report to the Senior Administrative Officer; provide secretarial and administrative support to the Registrar by arranging meetings and organizing pertinent documentation, scheduling appointments, screening telephone calls, etc.; provide administrative support for the Queens/RMC agreement and the Ontario Visiting Graduate student programs; monitor external departmental awards; provide assistance to the Fellowship Committee.

Requirements: high school education with post-secondary secretarial training and experience in a university environment (or an equivalent combination of education and experience); knowledge of all office procedures; solid knowledge of the Awards procedures, and rules and regulations of the Graduate School (asset); proficiency with word processing and spreadsheet applications; basic knowledge of the SISA and FINS systems; excellent interpersonal skills.

Minimum Hiring Salary: $28,338 Salary Grade 4 - ADMG4

Student Services Coordinator
2000-105
Faculty of Arts and Science

This is a term appointment working 100% time until March 31, 2001.

Major Responsibilities: report to the Manager, Student Services Division; responsible for the production, content and distribution of the Faculty of Arts and Science *Calendar* (edit *Calendar* copy, prepare the text for printing by incorporating all revisions and new copy, liaise with the OUR regarding revisions of courses and programs); provide administrative support and coordinate the work of both the Curriculum Committee and the Awards Committee; provide assistance to the Registration Coordinator; coordinate the information and layout of the Student Services website; maintain the web version of the *Calendar*.

Requirements: two years of post-secondary education with several years of relevant experience in a post-secondary setting (or an equivalent combination of education

to work with minimal supervision and initiative to make independent decisions; ability to work effectively as part of a team.

Minimum Hiring Salary: $33,686 Salary Grade 6 - ADMSF6

The Bader Curator of European Art 2000-107
Agnes Etherington Art Centre

Major Responsibilities: responsible for the care of the European collection and the associated program of exhibitions, interpretive events and publications; assist in the development of the permanent collection through research and recommendation of acquisitions of European works of art; carry out collection management activities as part of a curatorial team; assist the Director in obtaining funds in a highly-competitive environment.

Requirements: PhD in Art History; several years of related experience (preferably in an art museum); familiarity with the art market and with European art (specifically Northern Baroque); knowledge of appropriate European languages; proven supervisory and project management experience; outstanding written and oral communication skills; sound computing expertise; experience with exhibitions, gift processing, the creation of appropriate academic programs, and a collection management and research background. Candidates are requested to submit three letters of reference with their application.

Minimum Hiring Salary: $46,053 Salary Grade 9 - CCR9

Other Positions

Clinical Research Nurse
Department of Anesthesiology

This is a three year term appointment. Compensation will be based on experience.

The Department of Anesthesiology at Queen's University has established a Clinical Pain Research Program aimed at advancing knowledge about human pain mechanisms and developing new treatments for the management of pain.

Feb 17/95

Editorial

Art and Queen's

ALFRED Bader wants to give Queen's $40 million worth of 17th century art. But he wants to make sure that we deserve it first.

Bader has made his gift of the Old Masters conditional on the renovation of the Agnes Etherington Art Gallery, to the tune of $18 million. This is needed because the gallery currently doesn't have the climate control and security that these paintings require. If the renovations don't happen the collection may go to Harvard University, or another American school that has the facilities to display it.

Understandably Bader, like the long dead painters, wants the classic art to adorn a public gallery and not a Kingston warehouse. However, $18 million is a lot of money, especially in lean times like these. Meeting that funding target has not been made any easier by the Harris government's recent cancellation of a $3 million grant, promised by Ontario's previous NDP regime. In this climate of underfunding and squeezed budgets, it's easy to view $18 million as an impossible task, and it's easy to lay blame. But, that, ultimately, is an abdication of responsibility on the part of the Queen's community.

Why, some people ask, can the wealthy Dr. Bader not help fund the gallery, if he is so intent on Queen's displaying his art? Would it not be easier to sell a couple of paintings and then give us a $37 million collection, and a place to put it? In addition to being ungracious, such reasoning misses the point of philanthrophy. People like Bader give Queen's endowments not only for the immediate help they provide, but also to set an example. They hope that we, too, will endeavour to enrich Queen's in our own little ways.

Why some people ask can the

Why, some people ask, can the province not honour its previous funding commitment? Yes, there is a deficit, but what's $3 million compared to the billions Ontario spends? But such a "not in my backyard" philosophy is irresponsible, and is precisely what got the provincial finances into such a mess in the first place.

It is also hard to justify asking the government to slash welfare rates while still funding art gallery renovations. Queen's students cannot expect welfare recipients to eat one less can of discount tuna per week, simply to give them a better art show. Finally, some have questioned whether a collection of paintings should even be a top priority for Queen's, generous as it is of Dr. Bader to offer them. After all, $18 million spent on residence renovations, library acquisitions, lab equipment, or tuition subsidies would appear to affect the lives of students far more than old paintings.

But Queen's, as a university, must sometimes look beyond everyday, concrete concerns, important as they are, and devote some resources to the less tangible goal of creating an atmosphere of high culture. A university must be a place where people are inspired to think great thoughts, and that requires more than just good lab equipment.

So, what is to be done? Dr. Bader should donate his paintings, provided Queen's does its bit to enrich campus culture, because that's what philantrophists do. The Ontario government should continue to curtail spending to balance its budget, because that's what governments these days do. And Queen's should devote itself to coming up with the money to provide a place for great art and enriching itself as a place of humanity, inspiration, and free thought: because that is what universities do.

SEQUEL

Issue 6, Winter 1981

Purdue University, School of Science

Swept Away

There are certain problems for which the solutions seem so clear that any answer other than the most obvious is an affront to common sense.

For example, when the coastline at Virginia Beach, Virginia, was threatened by storm waves a local building contractor assured the city fathers that they didn't need any scientific analysis or planning to stop the erosion. He promised them that he could stop the surf with a fence-like stand of steel I-beams, which he then installed. The very next storm (not a particularly severe one, either) cleanly, neatly, sheared the I-beams off at the water line.

It is clear that little is known about the enormous forces at work on our coastlines and in our harbors. In addition to the damage done by erosion to beaches and the homes that adjoin them, the U.S. Army Corps of Engineers each year spends $100 million just to keep harbors dredged free of silt. Yet, the common solutions to these problems are often only "band-aids." Until recently, no attempt had been made to discover the underlying causes.

Surprisingly, even though the U.S. has hundreds of harbors and ports, and dozens of states with major coastal areas, practically nothing is known of the "basic science" governing the major problems affecting these areas. There is essentially no understanding of how water and sand particles interact at the waterbed, how the particles are lifted, or what determines the directions and quantities of what is moved.

One of the major reasons so little is known, is the enormous power contained in even the small waves where instruments must be placed to obtain data. These waves easily destroy more sensitive instruments

Most people see the gentle surf on the coast as a thing of gentle beauty. Few realize that a 100 meter stretch of beach with waves that average 1 meter in height absorbs as much energy in a year as is generated by our largest fossil fuel electric plant in the same period of time.

This energy can be and often is drastically increased by slight changes in the coastal area. Adding a breakwater, for example, can cause enormous damage to the adjacent shoreline in a period of just a year or two if it is not carefully placed.

Professor William Wood of Purdue's Department of Geosciences is studying wave action both at the coastline and in the laboratory in the belief that by learning how waves dissipate their energy when they break, scientists will begin to understand the way these waves move silt or erode beaches.

Part of his efforts are directed to two types of modeling: In one he attempts to express the relationship between sediment transported down a coast and the wave height in the same area. In the second, long and short term predictions are made of coastal erosion based upon lake level variation and climatology.

These predictions are vitally important because, to date, almost all of the data used in such predictions have been qualitative and crude. Just as very little is known about what happens when a wave breaks, little is known of the impact a storm has on a coastal area as it passes over, or how much material is moved. Some of these incorrect early prediction techniques are still being used in engineering manuals, but the Army Corps of Engineers has asked Wood and his assistants to use their observations to update manuals on coastal hydrographic techniques.

Professor William Wood stands at the foot of a stairway that residents at Beverly Shores, Indiana, built to a beach that has since been washed away by Lake Michigan.

Wood has learned that even on Indiana's relatively protected coastlines, a single winter's storm can cause the waterbed at the shore to swallow up a good-sized boulder, and can slice away several feet of the shore, as well as any houses that might be in the way. Water-breaks or artificial harbors built in the wrong place can magnify these forces. Wood was recently asked to assist with the choice of a site for a new harbor to serve Gary, Indiana. Wood's evaluation of the coastal dynamics of the area showed those selecting the sight just how the placement of the harbor would affect the area.

But not everyone listens to scientific advice. The Beverly Shores residents, alarmed at the threat of encroaching waters, have requested and received multi-million dollar "revetment" (placements of large rocks to stop erosion). Unfortunately, these costly band-aids must be repaired every few years as they are literally gobbled up by the soft shore-bed. In Michigan, a similar attempted solution, misplaced, saw the surf move in behind the revetment, leaving the area with a humiliating monument to poor planning a few feet out in the water as the waves continued to erode the coastline.

(Continued on page 3)

Purdue's New Mining and Minerals Institute

America's recent monomaniacal struggle against dependence on foreign oil may be hiding a wider-ranging series of problems that are potentially just as threatening.

"The nation is slipping badly in its ability to supply its needs for mineral-derived raw materials and energy," according to Purdue Geosciences Head Donald Levandowski. "For many of these we are becoming more and more dependent on foreign sources, and many of these sources are either hostile to the U.S. or are located in politically unstable areas of the world."

But Levandowski and his colleagues at Purdue are not simply worrying about these problems, they are doing something to solve them. Dr. Levandowski was recently named director of Purdue's new Indiana Mining and Mineral Resources Research Institute (IMMRRI). The Institute's goal is to increase the volume and quality of research that should in turn improve our methods of locating, extracting and refining essential mineral resources. To do so, scientists and engineers must discover ways of obtaining minerals at acceptable cost levels and with the least damage to our environment. The Institute hopes to further improve research in these areas by increasing the number of mineral scientists and engineers working in this field.

Purdue's institute is one of thirty-one state research institutes which have been created under Title III of the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). Purdue was named Indiana's research facility in December of 1979.

State mineral and mining research institutes are mandated to approach mining-related problems with a variety of solutions. Research is encouraged and financially supported in eight major areas: exploration, mineral production, mineral processing, extraction, smelting and refining, mineral economics, resource recovery from waste materials, environmental control and reclamation, and mineral policy (which means the analysis of laws, regulations and government policy on mineral production). An increase in the number of mining scientists and engineers is encouraged through

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If you live in the Midwest

This Story Might Shake You Up

by Rena Leith Weber

In Chicago, a factory worker grabs at his breakfast coffee as the cup dances away from him on the table. He turns, startled, as the windows rattle and the kitchen cabinets swing open spilling dishes onto the floor. In Indianapolis, people, frightened by the tremor, run screaming into the streets as their tall condominiums and apartment buildings begin to sway and crack. People in Evansville are awakened as their beds dance across the floor and their dressers overturn. Soon, chimneys fall into the street and some older buildings begin to collapse.

In the tiny town of New Madrid, Missouri, a hundred miles away, few people escape the destruction. What little has not been flattened by the initial quake is either destroyed by the raging fires fed by the broken gas pipes or washed away as the Mississippi River changes its course to flow through the downtown area.

This scenario may sound like science fiction in the seismically sedate world of the midwest, but an earthquake of the intensity just described, rocked the eastern United States just 170 years ago. Fortunately, the midwest was sparsely populated then, and the log structures common throughout the area were able to roll with the earthquake without severe damage. This earthquake, whose epicenter was located at New Madrid, was one of the strongest ever recorded in the continental United States.

Though the recurrence of such strong earthquake activity might seem remote, those responsible for planning the future of the midwest must take into account the threat of such violence and the impact it might have on our densely populated areas. Of particular concern is the threat that seismic activity poses to nuclear power plants. Even before Three Mile Island awakened the public to the dangers of a disaster at a nuclear power plant, the Nuclear Regulatory Commission (NRC), the federal agency charged with supervising the construction of nuclear power plants, was very concerned with the location of power plants in relation to seismic "fault zones," the areas most likely to experience earthquakes.

Three Purdue University geoscientists are mapping the fault associated with the New Madrid earthquakes and other potentially active faults in the midwest under a grant from the NRC. The NRC uses this information to judge the potential for earthquake damage at proposed nuclear power plant sites. The three, Drs. Lawrence Braile, John L. Sexton, and William J. Hinze, in conjunction with Dr. G. Randy Keller of the University of Texas at El Paso and Dr. Edward G. Lidiak of the University of Pittsburgh, are studying the faults and seismic activity associated with the New Madrid and Wabash Valley fault zones. The fault zones under study include parts of Kentucky, Missouri, Arkansas, Tennessee, Illinois, Indiana and Ohio. The boot heel of Missouri is the center of seismic activity for this area.

Studies of the earthquake hazard near nuclear power plant sites is done for the Division of Reactor Safety Research of the NRC. The Research Division then uses the information to publish pertinent materials and to make recommendations to the licensing branch in three areas: the building of nuclear facilities, the building of other critical facilities such as one for liquified natural gas, and the establishment of building codes. The Regulatory Guide has the force of law, according to Dr. Jerry Harbour, a geologist who works for the NRC.

"The information often does not offer a clearcut positive or negative answer on the safety questions," says Dr. Harbour. "The information is used primarily to determine the advisability of a site."

Earthquake prediction is very frustrating with a high rate of failure. But Dr. Braile feels that "seismic problems can be handled with knowledge." The probability of an occurrence happening is never zero. There is always a risk. The public has to determine what the "level of acceptance risk" is in a given situation. As Dr. Braile pointed out, when a passenger boards an airplane, he is accepting the risk that the plane might crash. Because of the few airplane crashes, the passenger has determined that, for him, the "level of acceptable risk" is low enough. The same thing is true with nuclear power plants. In this case, unless the public becomes involved, the "level of acceptable risk" is determined by the NRC. Every nuclear power plant carries a risk with it. One built on an earthquake fault zone carries an even higher risk.

One result of similar research conducted by a separate group is that the construction of the Diablo Canyon Reactor in California has been held up for almost two years while the NRC investigates the threats posed by earthquakes from an offshoot of the famous San Andreas fault. This previously unmapped area was found to extend further than had been previously believed. Efforts are currently underway at Diablo Canyon to improve the ability of the reactor to withstand earthquakes.

In southeastern Indiana, Public Service Indiana is building the Marble Hill nuclear power plant near the Ohio River. Before applying for a permit to build the plant, Public Service Indiana, (PSI), hired Birdwell Division of Seismograph Service Corporation to provide information on the history and potential for seismic activity near Marble Hill. Even though the Wabash Valley fault zone is quite close to the Marble Hill site, Birdwell concluded that the area is geologically sound with no major earthquake epicenter close enough to cause worry about substantial damage from an earthquake. Specifications call for the plant to be built to withstand an earthquake of intensity 8 on the Modified Mercalli Intensity Scale which is a 12 point scale (12 being highest) that is used to measure the intensity of an earthquake. The studies, conducted preliminary to the building of the Marble Hill plant, show that the New Madrid Earthquakes of 1811, which produced an intensity 11 at New Madrid, produced intensities of 6 to 7 at what is now the Marble Hill site. That force would be enough to damage buildings, break chimneys and rock cars.

PSI has issued a report on Marble Hill which contains a section (MH-PSAR sec. 2.5.2.3) that describes the kinds of physical evidence used as indicators of recent seismic activity.

"However, there is no evidence at or near the site, such as damaged structures, surface rupture, mass movement, and boils, or any other phenomena which would indicate the presence of strong earthquake shaking."

But in some areas of the country, such as the midwest, the above cited indications of seismic activity are eradicated by other factors. According to Dr. Braile, the evidence of earthquakes varies greatly from one section of the country to another and is sometimes difficult to judge. In faults like New Madrid, evidence of seismic activity is often hidden by surface features and vegetation. In the New Madrid fault area, the river bed sedimentation wipes out the evidence of faults almost entirely.

Earthquakes cannot be prevented, and they are difficult to predict. Preventing a major catastrophe in the midwest in the future requires planning and sensitivity to human needs today. ■

Sometimes the Truth Is Stranger than Fiction

As the article above was being written and edited, there was a great deal of discussion about whether or not to begin with a fictionalized account of a severe earthquake. The following United Press International account of the July 27, 1980 midwest earthquake bore such a striking resemblence to portions of our article that we decided to not only go forward with our original version of the story, but to also reprint U.P.I.'s report; dated July 29, 1980:

The tremor rumbled through downtown Detroit, slightly shaking several large buildings, including the 73-story Detroit Plaza Hotel. Tremors were felt in parts of Chicago.

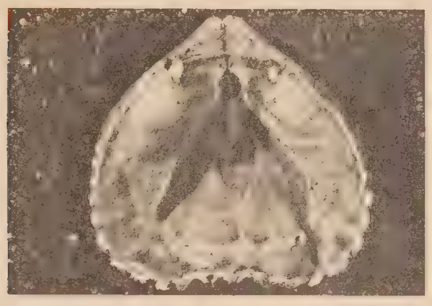
An Indiana state police officer in Indianapolis said he was sitting in his office when "a table started walking. Pictures started swinging, and the portable walls in here started moving around. I headed for the door."

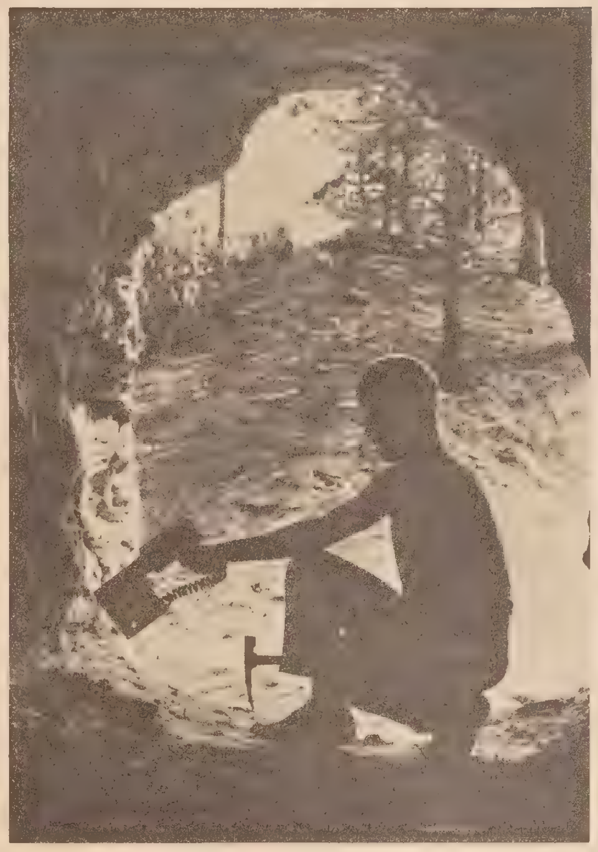
Tennessee civil defense authorities said one trailer in Grainger County in eastern Tennessee was knocked off its foundation.

Officials in Tennessee and West Virginia said the quake shook tall concrete buildings, rattled dishes on shelves and swayed mobile homes.

Greg Hutchins, a disc jockey at WZAP radio in Bristol, Va., said he noticed a table moving while he was on the air.

"The whole console was shaking," he said. "I thought one of the other disc jockeys had slipped in and was pulling my leg. I looked under the table but nobody was there." ■





A fossil of Lepidocyclus cooperi (top left) from the Upper Ordovician. Bottom left, Professor Earl Geist grinding thin sections of rock samples using an Ingram Grinder (early 1970's). Exploring for uranium (center) in the mid-1950's at "Hold Up No. 5" mine in the Black Hills. At right, a simulation of a multiple-vortex tornado using Purdue's Tornado Simulator which was developed by Ernest Agee, Christopher Church and John Snow in 1975.

Purdue's New Mining and Minerals Institute

(Continued from page 1)

the provision of scholarship and fellowship funds for undergraduate, graduate and post-doctoral students.

Purdue was selected as Indiana's mining and minerals institute precisely because it had active research programs in more areas related to the mining industry than any other school in the state. Purdue's institute will be assisted by a faculty advisory committee with representatives from geosciences, civil engineering, industrial engineering, materials engineering, agronomy and forestry.

In the case of Indiana's research program, the multifaceted approach will not be limited to the on-campus portion of activities; the Institute will cooperate with as many state governmental agencies and industries as possible in seeking solutions to problems pertaining to Indiana's resources.

The impact of an institute for mining research on a state known primarily for its agriculture may seem remote but, the Institute is already beginning to address some serious problems.

For example, Indiana's coal resources alone number 30 billion tons. The coal industry faces serious problems in finding inexpensive yet effective means of restoring land which has been mined to a useful purpose, and in helping to reclaim abandoned mine sites. Two Purdue research groups in Forestry and Agronomy have already been funded by the Office of Surface Mining to study this problem.

A much more difficult problem the Institute hopes to address is that the use of much of Indiana's coal is severly limited by its high content of sulphur. This substance poses environmental hazards and is also difficult to remove. The absence of a technology for easily and inexpensively removing sulphur from coal demonstrates one particular need for research. The lack of such technology has resulted in a delay in the development of new mines. Thus, fewer jobs are being created, and fewer dollars spent in Indiana's economy. Indiana must also rely more heavily on oil and natural gas for its energy.

Of course, Indiana's resources aren't limited to just coal. It also produces large quantities of limestone (used in building), sand and gravel, ceramic and refractory materials, gypsum and dolomite. Each of these minerals presents its own special technological problems.

Purdue geosciences student Howard Hume has undertaken a study of a problem that, though less related to the needs of mining in Indiana, shows what truly difficult problems mining can pose. His study concerns copper mining. It doesn't deal with how to find or refine copper, but rather with the "hole" problem: what is the most advantageous slope the quarry-like mine should take. The shallower the angle of the slope, the more land must be removed to get to the copper. Finding the ideal slope can have great significance not only for the cost of mining but also for the ease with which the mining can be done, and the amount of copper that can be obtained.

As its initial one-year grant, the institute received $110,000 to fund seed projects and pay operating expenses. Seed projects ranging from a study of silver ores in Colorado to the improvement of an underground train system for hauling coal are currently being funded by the institute. In addition, the Institute received $160,000 to provide scholarships and fellowships over a three-year period.

Nationally, $2,000,000 in research money is available annually to supplement the funds funneled through the state programs. This money is not allocated on a state-by-state basis, and so the competition is fierce. This year alone there were 450 proposals for research projects submitted through the 31 state institutes around the country. Of the 450, 16 were from Purdue. Of the 16 proposals submitted two were funded for a total of over $200,000.

The need for state research facilities became apparent during the 1970's as public policy experts became increasingly aware that existing technologies were unable to keep the cost of mining at an acceptable level. At the same time, it was just as evident that these technologies were less and less useful in helping us fill our needs for ever larger quantities of strategic materials.

Thus, America has found itself in recent years becoming dependent for strategic minerals on countries that may not be above the use of economic blackmail. In fact, rumors have been circulating for months that we can soon expect to see the creation of OPEC-like consortia of nations producing such substances as tungsten, tin and chromium. The steps being taken today by the state mining and mineral institutes may provide insurance against the day when this country would run out of essential minerals if present trends continue. ■

Swept Away

(Continued from page 1)

Wood's research is steadily adding to the body of knowledge that will someday help us to prevent errors like these while at the same time enabling engineers to take steps to prevent damage to our harbors and coasts.

But of course, people are always ready to offer Professor Wood advice on the "real" causes of coastal devastation. Recently, one gentleman button-holed Wood and in all seriousness suggested that the rise in Lake Michigan's level and the turbulence in its waters were caused by the Coho Salmon that had been introduced a few years earlier. Wood listened patiently. . .and went back to work.■

DEAN'S message

by Vannevar Bush

The article below originally appeared in a bibliography entitled "A Keepsake in Honor of Vannevar Bush" which was printed in 1959 by the Massachusetts Institute of Technology. It later appeared in an anthology called The Practical Cogitator, *selected and arranged by Charles P. Curtis, Jr. and Ferris Greenslet, copyright 1962 by Houghton-Mifflin Co. The collection is now available in a paperback edition printed by Dell Publishing Company.*

The process by which the boundaries of knowledge are advanced, and the structure of organized science is built, is a complex process indeed. It corresponds fairly well with the exploitation of a difficult quarry for its building materials and the fitting of these into an edifice; but there are very significant differences. First, the material itself is exceedingly varied, hidden and overlaid with relatively worthless rubble, and the process of uncovering new facts and relationships has some of the attributes of prospecting and exploration rather than of mining or quarrying. Second, the whole effort is highly unorganized. There are no direct orders from architect or quarrymaster. Individuals and small bands proceed about their businesses unimpeded and uncontrolled, digging where they will, working over their material, and tucking it into place in the edifice.

Finally, the edifice itself has a remarkable property, for its form is predestined by the laws of logic and the nature of human reasoning. It is almost as though it had once existed, and its building blocks had then been scattered, hidden, and buried, each with its unique form retained so that it would fit only in its own peculiar position, and with the concomitant limitation that the blocks cannot be found or recognized until the building of the structure has progressed to the point where their position and form reveals itself to the discerning eye of the talented worker in the quarry. Parts of the edifice are being used while construction proceeds, by reason of the applications of science, but other parts are merely admired for their beauty and symmetry, and their possible utility is not in question.

In these circumstances it is not at all strange that the workers sometimes proceed in erratic ways. There are those who are quite content, given a few tools, to dig away unearthing odd blocks, piling them up in the view of fellow workers, and apparently not caring whether they fit anywhere or not. Unfortunately there are also those who watch carefully until some industrious group digs out a particularly ornamental block, whereupon they fit it in place with much gusto and bow to the crowd. Some groups do not dig at all, but spend all their time arguing as to the exact arrangement of a cornice or an abutment. Some spend all their days trying to pull down a block or two that a rival has put in place. Some, indeed, neither dig nor argue, but go along with the crowd, scratch here and there, and enjoy the scenery. Some sit by and give advice, and some just sit.

On the other hand there are those men of rare vision, who can grasp well in advance just the block that is needed for rapid advance on a section of the edifice to be possible, who can tell by some subtle sense where it will be found, and who have an uncanny skill in cleaning away dross and bringing it surely into the light. These are the master workmen. For each of them there can well be many of lesser stature who chip and delve, industriously, but with little grasp of what it is all about, and who nevertheless make the great steps possible.

There are those who can give the structure meaning, who can trace its evolution from early times, and describe the glories that are to be, in ways that inspire those who work and those who enjoy. They bring the inspiration that all is not mere building of monotonous walls, and that there is architecture even though the architect is not seen to guide and order.

There are those who labor to make the utility of the structure real, to cause it to give shelter to the multitude, that they may be better protected, and that they may derive health and well-being because of its presence.

And the edifice is not built by the quarrymen and the masons alone. There are those who bring them food during their labors, and cooling drink when the days are warm, who sing to them and place flowers on the little walls that have grown with the years.

There are also the old men, whose days of vigorous building are done, whose eyes are too dim to see the details of the arch or the needed form of its keystone; but who have built a wall here and there, and lived long in the edifice, who have learned to love it and who have even grasped a suggestion of its ultimate meaning; and who sit in the shade and encourage the young men. ■

About Vannevar Bush

Dr. Vannevar Bush, the developer of the analog computer, was also director of the wartime Office of Scientific Research and Development which supervised the efforts of 30,000 scientists throughout World War II. Bush was long a spokesman for the scientific community. He died in 1974 at the age of 84.

"Portrait of Rembrandt" (above left) was used to announce a special exhibit of paintings called "Old Students and Old Masters: The School of Rembrandt". The exhibit of 18 paintings from the collection of Dr. Alfred Bader was presented in the Union Gallery in late October in honor of one of Dr. Bader's friends, Dr. Herbert C. Brown (above right). The exhibit was part of a celebration of Dr. Brown's dual receipt of the 1979 Nobel Prize for Chemistry and the 1981 Priestly Medal of the American Chemical Society. In welcoming the hundreds of guests assembled for the celebration, Dean Clark announced that he had bad news and good news. The bad news was that due to the heat and humidity in the gallery the Portrait of Rembrandt Von Rijn had faded, revealing another portrait underneath the original. The good news was that the underlying portrait was not a fake Rembrandt, but rather an authentic Brown. The "Brown" Rembrandt was executed by Purdue's Ed Blackwell (von Wabash).

PURDUE UNIVERSITY
SCHOOL OF SCIENCE **SEQUEL**

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SEQUEL
Purdue University, School of Science

CHEMLUMINARY AWARDS RECOGNIZE VOLUNTEERS

THE FIFTH ANNUAL CHEMLUMINARY Awards, which recognize the efforts of volunteers on behalf of the American Chemical Society, were given at a special gala celebration on Tuesday, Sept. 9, at the national meeting in New York City. Thirteen groups presented a total of 48 awards at the ceremony.

Detailed information about the award winners, which are listed below, can be found at http://www.cen-online.org.

Listed are the award sponsor, the name of the award, and the section or division receiving the award. Local section size categories are determined by the number of members: small, fewer than 200; medium small, 200–399; medium, 400–799; medium large 800–1,599; large 1,600–3,199; very large, more than 3,199.

COMMITTEE AWARDS

Chemistry & Public Affairs

ACS President's Award for Local Section Government Affairs: Georgia

Divisional Activities

Recognition of Innovation & Outstanding Service to Members of a Division: Chemistry & the Law, Colloid & Surface Chemistry, History of Chemistry, Industrial & Engineering Chemistry, and Organic Chemistry

Economic & Professional Affairs

Best Local Section Career Program: small to medium large, Indiana-Kentucky Border; large to very large: Delaware

Local Section Activities

Best Activity or Program Stimulating Membership Involvement: Inland Northwest
Most Innovative New Activity or Program: Delaware
Most Innovative Use of Technology: Rochester
Local Section Outstanding Performance Awards: small, Indiana-Kentucky Border; medium small, Peoria; medium, Nashville; medium large, Cleveland; large, St. Louis; very large, North Jersey

Membership Affairs

Grassroots Award: Division of Chemical Technicians, Chemical Society of Washington (ACS Washington D.C. Section)

Minority Affairs

Best Overall Local Section Committee on Minority Affairs: Chicago
Outstanding ACS Scholars Program: Northeastern

Project SEED

Outstanding Project SEED Program: North Jersey

Public Relations & Communications

Helen M. Free Award: Lee Marek, Naperville, Ill.
Local Section Public Relations Awards: small to medium, Idaho; medium large to very large, Cincinnati

Society Committee on Education

ACS Student Affiliate Chapter Interaction: Kentucky Lake
Outstanding High School Student Program: Indiana
Outstanding Kids & Chemistry Program: St. Louis

Women Chemists

Best Overall Local Section Women Chemists Committee: California
Best Single Event in a Local Section Promoting Women in the Chemical Sciences: Pittsburgh
Most Innovative Recognition of Women in the Chemical Sciences: Indiana

Younger Chemists

Most Creative Local Section Younger Chemists Committee (YCC) Event: North Jersey
Outstanding Local Section YCC: North Carolina
Outstanding Local Section YCC Event: Northeastern
Outstanding New Local Section YCC: Columbus

OTHER CHEMLUMINARY AWARDS

Division of Chemical Technicians

Best Local Section Technician Affiliate Group (TAG) Interaction: Rochester
Best Overall TAG: Mid-Michigan
Most Innovative TAG: Western Pennsylvania

National Chemistry Week Task Force

National Chemistry Week (NCW) Best Event with Underrepresented Minority Groups: Pittsburgh
Best NCW Contest: Peoria Local Section
NCW Best Student Affiliate Event: Western New York
Greatest Community Involvement in NCW: Indiana
Greatest Industrial Involvement in NCW: Brazosport
NCW Most Original Hands-On Activity or Chemical Demonstration: Mid-Hudson
NCW Outstanding Event for a Specific Audience: Michigan State University
NCW Outstanding Event for the General Public Using the Yearly [NCW] Theme: Northeastern
Outstanding Ongoing NCW Event: Cleveland
NCW Outstanding Teacher Program: Cleveland

Bader lectures CHF on the rocky road to success

HURRICANE ISABEL DIDN'T PREVENT Aldrich Chemical founder Alfred Bader from giving the 2003 Ullyot Public Affairs Lecture in Philadelphia at the Chemical Heritage Foundation (CHF). Though the bad weather cut attendance to about 100, half of what had been expected, Bader—shown here (left) with his wife, Isabel, and 1997 Public Affairs Lecturer and retired Merck CEO P. Roy Vagelos—regaled the audience with the story of the "rocky road to success" for the chemical supplier known since the 1970s as Sigma-Aldrich.

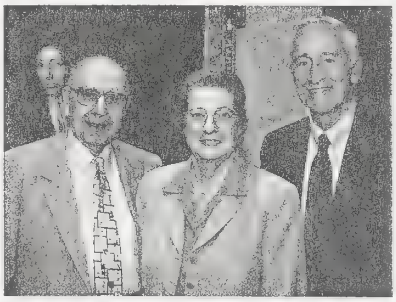


PHOTO BY STUART WATSON

CHF President Arnold Thackray introduced Bader and "the real Isabel," whom he complimented as both lovelier and much better tempered than the storm then brewing outside. As the real Isabel projected images for the audience on an overhead screen, Bader described such artifacts as his first advertisement: It appeared in the C&EN issue of June 1, 1953, and cost $29.

While working toward his Ph.D. at Harvard in 1949, Bader said, Eastman Kodak—then the main source of research compounds—was unable to fill an order he

sent. The disappointment led him to reason he could be "a chemist's chemist" and supply building blocks and reagents to the research community. Bader had many successes and some setbacks, including his ejection from Sigma-Aldrich in 1992. He is again welcomed back at the company he helped make a $1.2 billion success today.

2003 Midwest award to Bowman-James

KRISTIN BOWMAN-JAMES, OF THE University of Kansas, will recieve the 59th ACS Midwest Regional Award on Nov. 6 in Columbia, Mo.

A colleague notes that Bowman-James is "one of the world's leading experts" in supramolecular chemistry who has had a "valuable impact on my own thinking and that of many others." Her work on metal-based phosphate cleavage has "set a standard for artificial enzyme efficiency that has rarely been surpassed," the colleague says. Others point out that Bowman-James jump-started research in this area by the fruitful analogy between ligand-anion and metal-anion recognition.

Bowman-James has also contributed to public understanding and support of chemistry and chemical education through service to the Council on Chemical Research, ACS, and research support agencies of the U.S. government.

She was educated at Temple University, Israel Institute of Technology, and Ohio State University. She joined the chemistry faculty of the University of Kansas in 1975.

NIEHS's Olden receives achievement award

KENNETH OLDEN, DIRECTOR OF THE National Institute of Environmental Health Sciences (NIEHS), has received the 2003 Council of Environmental Professionals Achievement Award.

Olden, a cell biologist and biochemist, has been active in cancer research for almost three decades. Before joining NIEHS, he was director of the Howard University Cancer Center and professor and chairman of the department of oncology at Howard University Medical School, Washington, D.C.

He has been elected to membership in the Institute of Medicine and has received several awards for distinguished public service, including two presidential citations.

Olden holds a bachelor's degree in biology from Knoxville College, a master's degree from the University of Michigan, and a Ph.D. from Temple University. He held postdoctoral fellowships and was a Macy Faculty Fellow as an instructor at Harvard Medical School.

Wender to deliver Lind Lectures

PAUL A. WENDER, BERGSTROM PROfessor of Chemistry and professor of molecular pharmacology at Stanford University, will deliver the S. C. Lind Lectures in early November. These lectures, which have been sponsored annually by the ACS East Tennessee Section since 1948, will be presented at the University of Tennessee, Knoxville, and Oak Ridge National Laboratory.

Wender's research involves studies in chemistry, biology, and medicine with a special emphasis on the synthesis of novel structures with unique modes of action and therapeutic potential. His group has pioneered or invented new reactions for synthesis and has achieved more than 50 total syntheses of a wide range of molecules, including phorbol, taxol, bryologs, and resiniferatoxin. His work has resulted in compounds now in clinical trials or in preclinical development. He has pioneered new drug delivery approaches that have led to two new companies and compounds in preclinical and clinical development.

David Harpp named Norris awardee

DAVID N. HARPP, THE SIR WILLIAM C. Macdonald Professor of Chemistry at McGill University, will receive the James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry.

The award, which includes a citation and an honorarium, will be presented to Harpp on Nov. 13. His scheduled talk is titled "Communicating Chemistry: From Large Classes to the Larger Public."

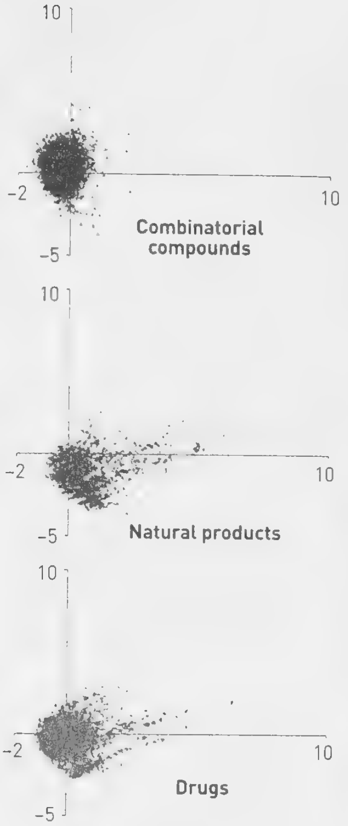
Harpp received his bachelor's degree from Middlebury College in 1959, a master's degree from Wesleyan University, and a Ph.D. degree from the University of North Carolina in 1965. After a postdoctoral year at Cornell, he joined the department of chemistry of McGill. Harpp's area of research is organosulfur chemistry.

Harpp has made notable contributions in the teaching of chemistry, including introductory organic chemistry, as well as a suite of highly popular courses at McGill entitled "The World of Chemistry." These courses deal with such subjects as the practical considerations of food, drugs, and modern technology, including environmental aspects. He was instrumental in organizing a chemistry program of demonstrations and lectures for the UNESCO pavilion at the "Man and His World" world exhibition in Montreal in 1980 and 1981, and he spearheaded one of the largest chemical exhibitions in history in 1995 in Montreal; it attracted 370,000 people.

Nominations wanted for green chemistry awards

THE ENVIRONMENTAL PROTECTION Agency is now accepting nominations for the 2004 Presidential Green Chemistry Challenge Awards. These awards recognize innovative chemical technologies that incorporate green chemistry into chemical design, manufacture, and use and that have broad application in industry. Nominated technologies should reduce or eliminate the use or generation of hazardous substances from a chemical product or process.

Any individual, group, or organization, both nonprofit and for profit, including academia, government, and industry, may nominate a green chemistry technology for these awards. Self-nominations are welcome and expected. Typically, five awards are given each year: one to an academic researcher, one to a small business, and the rest in specific areas of green chemistry. Each nominated technology must have reached a significant milestone within the past five years in the U.S. Nominations must be postmarked by Dec. 31 to be eligible for the 2004 awards, which will be presented at the National Academy of Sciences in Washington, D.C., on June 29, 2004. For more information, go to http://www.epa.gov/greenchemistry/howto.html. ■



DISTINCTIVE In chemical diversity space, combinatorial compounds densely populate a small area, whereas natural products are more spread out [*J. Chem. Inf. Comput. Sci.*, 43, 218 (2003)].

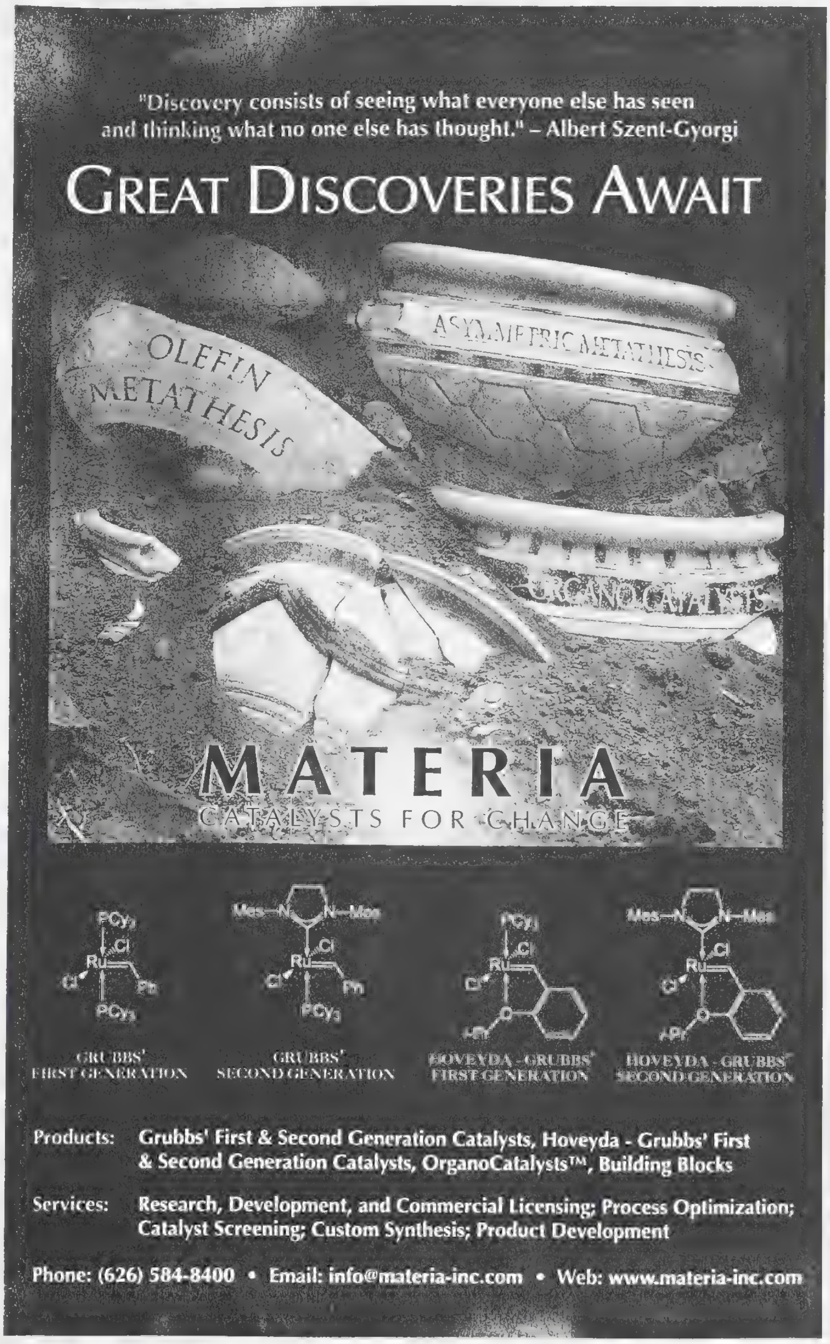
principal source of compounds for lead discovery, Hirschmann says. He suggests, in a foreword to the second edition of "The Practice of Medicinal Chemistry," edited by Camille G. Warmuth (Academic Press, 2003), that pharmaceutical companies should also try to validate new technologies—in the same way new biological targets are validated—"on a modest scale before they are extensively embraced."

Some say combinatorial chemistry technology has not had enough time to prove itself. Others say the early libraries were intrinsically useless for drug discovery because the compounds were too simple and too similar to each other. Screening works by exposing a target to as much chemical diversity as possible to find those rare compounds that will bind to the target. But the early combinatorial libraries offered only a narrow slice of chemical space—the multidimensional space in which individual molecules are points defined by their characteristics and descriptors.

"The combinatorial libraries in the early years were so flawed," Lipinski says, "that if you took the libraries across pharma from 1992 to 1997 and stored them in giant dumpsters you would have improved productivity."

A 1999 study by chemists at the German pharmaceutical company Bayer, comparing synthetic compounds and natural products, revealed striking differences in structural properties (C&EN, March 29, 1999, page 28). On average, natural products have higher molecular weights; incorporate fewer nitrogen, halogen, or sulfur atoms but more oxygen atoms; and are sterically more complex, with more bridgehead tetrahedral carbon atoms, rings, and chiral centers.

More recently, Miklos Feher and Jonathan M. Schmidt at SignalGene, Guelph, Ontario, analyzed and compared compounds from combinatorial libraries, natural products, and drugs in the market to evaluate how they occupy a statistical-



Masterpiece of a master

Chemistry & Biology December 1995, 2:803–804

Adventures of a Chemist Collector by Alfred Bader Weidenfeld & Nicolson Ltd, 1995, 288 pages, $25 hardcover (ISBN [illegible]-297-83461-4

It was said of Goethe that his life was his greatest masterpiece. That applies as well to Alfred Bader. His is an intriguing and inspiring story of hard work and worthy obsessions. Now famed for his philanthropy, his art collecting and his remarkable career as a chemical entrepreneur, Bader vividly portrays the several intertwined worlds he has explored with zest and élan over seven decades.

Born in Vienna in 19[illegible], he faced many daunting vicissitudes. His father, "described as a charming, shiftless gambler," was murdered two weeks after Alfred's birth. His mother, a devout Catholic rejected by her family because she had married a Jew, was nearly penniless. Extraordinary inflation had set in, and his mother, in return for financial help, gave up Alfred for adoption by his father's sister, a childless widow. The early years of his boyhood were happy; he recalls fondly his enjoyment of soccer, stamp collecting, adventures with schoolmates, Jewish rituals and summer visits to Moravian villages. At the age of 10 he began buying drawings with money he'd been given for gifts or ice cream cones; this resulted in an examination by a child psychologist, with a reassuring verdict. But soon his youthful idyll was overwhelmed by the financial collapse of the Depression and by mounting anti-Semitism.

Luckily, Bader was among 10 000 Jewish children allowed to emigrate to Britain after Hitler took over Austria in 19[illegible] and blatantly attacked synagogues. Bader left Vienna at age 14, carrying one American dollar and a small suitcase with his stamp collection; he was not to see his aunt or his mother again. After the fall of France, in 1940, when Britain feared an imminent invasion, Bader was deported to Canada and interned with other "enemy aliens" along with captured German soldiers in a prisoner-of-war camp. After more than a year, he was released and his diligent pursuit of education was rewarded by admission to Queen's University in Ontario. As well as earning BS and MS degrees in engineering chemistry with distinction, Bader won prizes for debating and helped to raise funds to buy a house for the Hillel Foundation. During summers and for a year after graduation, he worked for the Murphy Paint Company [illegible]

Deciding to go for a PhD "at the best school that would admit me," Bader accepted a fellowship to Harvard and [illegible] with Louis Fieser. In his first year [illegible]

the next six exams and completed his PhD in well under three years.

Since he felt morally obligated to Murphy Paint, for helping him pursue graduate study, Bader took a job with the Pittsburgh Plate Glass Company, which had purchased Murphy. That brought him to Milwaukee in 1950, where the paint research division was located. Soon, in partnership with a friend, he launched as a sideline the Aldrich Chemical Company, incorporated with the minimum required capital of $500 and run from a garage. The impetus came from his experience as a graduate student, when he found that Eastman Kodak, then the only substantial supplier of organic research chemicals, was capricious and cavalier. After one year, with no salaries paid, Aldrich posted a profit of just $20; but after three years, Bader dared to commit himself full-time and bought out his partner. By dint of rapid, reliable, enterprising service to customers and astute judgement, over the next 20 years he built Aldrich into a thriving business. In 1975, Aldrich merged with Sigma, a biochemical supplier; the combined company now has annual sales of a billion dollars.

The intricacies of Bader's business adventures are well told and instructive, including the bizarre episode of his dismissal from the board of Sigma–Aldrich in 1991. Most striking, however, is Bader's earnest humanity, exemplified in what he terms the ABC of his life: "art, bible, and chemistry." It is exemplified also in his focus on the host of friends and family who have shared in his odyssey: the index lists about 600 names. Character

inquired at the Jewish Reform Tem was need for a Sunday School teacher, and thereby undertook a commitment to teaching 5th and 6th graders which he continued for 32 years.

In developing Aldrich, Bader was likewise evangelical. He personally sought out chemists all over the world, to find out what they needed and what new substances they could provide that he might market. Moreover, his interest was not limited to marketable items. He also established a Chemical Library, to preserve rare research samples that otherwise might have been lost. These efforts have greatly fostered research in synthetic chemistry.

The same sustained, personal devotion is manifest in his "buying, selling, trading, and giving away paintings. . . as many as 200 a year during the past decade." He slyly describes this as "a natural extension of my dealing in stamps," but confesses that "I am never happier than when hunting for dirty old paintings that might be hidden treasures," and provides a lively chapter detailing how he found many such treasures.

Foremost among Bader's treasures is his wife Isabel. Their romance is the most uncanny of his many remarkable

letters, prophetic dreams, a separation of 25 year other elements apt for an opera or fairy tale! Among many benefactions, Alfred and Isabel have indeed ently made a fairy-tale gift to Queen's University. This provided funds for the purchase and renovation of Herstmonceux Castle in Sussex, to serve as Queen's European campus.

This is a fine book about a wonderful life, written with verve and Pepys-like frankness. As remarked to me by Professor Michael Henchman, it is particularly to be recommended to young people, "to emphasize the importance, not of talent and social advantage, but of enterprise and resolve." It also emphasizes gratitude, joy and faith. In his final remarks, Bader says: "Whenever I have contemplated any achievement in my life, I have marvelled how many and how diverse are the people who have made it possible. . . With Isabel's vision, and if the Lord gives us time, we will find other great things to do."

Dudley R Herschbach, Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138, USA.

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The Molakova School Complex in the Czech Republic: A Gift from the Heart

www.jdc.org JDC Photo

The renovated playground was built to cater to the needs of the special children who will play there.

Within the Molakova School Complex in the Karlin neighborhood of Prague is a special education school that serves the needs of 120 mentally disabled children (either mentally challenged or severely under-developed).

Most of the children belong to the disadvantaged Roma (Gypsy) minority in the Czech Republic. The school is a special place that provides the necessary care and attention that these children need to develop and grow to their full potential.

During the severe floods of August 2002, nearly two meters of water swept through the school, rendering the facility unusable. Initially, the children were dispersed to other schools and put on half-shifts. While some schools in Karlin were being restored, it remained uncertain whether this special education school would also benefit from such reconstruction

Enter Dr. Alfred Bader and his wife, Isabel, residents of Wisconsin, almost 4,500 miles from Prague. One of the world`s foremost art collectors, Dr. Bader heard of the plight of these children and decided that he would work to make a difference. Dr. and Mrs. Bader agreed to make a $20,000 donation through the JDC for the repair of the school, with only one stipulation: that the City match his donation.

Under pressure from the school director to at least match Dr. Bader's gift, the City decided in the end to cover all of the costs of the renovation, set to take place later this year. Because his donation was no longer needed for its original purpose, Dr. Bader then agreed to the school's request to use the funds to renovate the students' park playground. The result is a state-of-the-art playground with special sections for the different age groups of boys and girls, in addition to a playing field for soccer and basketball.

In June 2003 Alfred and Isabel Bader were present in Prague for the inauguration of the new playground. They saw the enthusiasm expressed by the children. The kindness and generosity of the Baders, exemplified by this project and many others undertaken in partnership with JDC, will be felt for many years to come.

Dr. and Mrs. Bader attended the opening of the playground for the children at the Molakova School Complex.

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Premiers, CBC, Queen's University, and BC

By Bob Orrick

27 October 2003

Today, a collection of thoughts that collectively says much about this country.

First up, Canada's premiers are reported to have stated that they feel the future of the country will be on a better footing with the installation of Paul Martin as prime minister. On the surface, that comment speaks softly but beneath the rhetoric is a rather loud and damning condemnation of Jean Chretien, Canada's current prime minister. If the premiers feel that things will be better with Martin at the government helm, then they must have had serious reservations about Chretien and his ability to present Canada in a favourable light.

Next, Carole Taylor, chairman of the Canadian Broadcasting Corporation [CBC] recently was before a Senate committee exploring the state of the Canadian media. Taylor said that steady funding cuts over the past decade and a half "have squeezed CBC/Radio-Canada to the bone."

She went on to state, "This death by a thousand cuts cannot continue, not if we are to do the job Canadians expect us to do."

From this corner, the first death would and should have been sufficient to rid Canada of this left-leaning, anti-Israel, anti-USA hotbed of socialism that continually brings discredit to Canada.

Ms. Taylor used the words, "... if we are to do the job that Canadians expect us to do;" but when Canadians tell CBC what it is they expect Mother Corporation to do, the mandarins at the taxpayer-funded socialist organisation simply ignore Canadians' comments and mindlessly carry on with their left-wing rants. Let us hope that last month's $10 million funding cut is the not the last.

CBC might have made sense in November 1936 when it was created in an attempt to protect Canada against American cultural penetration. Today, several decades later, Canada has grown up sufficiently that it no longer needs a 'Big Mother' to watch over it to ensure that those nasty Americans cannot flood its markets with their views on just about everything. Surely, Canadians are smart enough to decide for themselves whether or not to listen to, or to view, or to read American propaganda sent their way. It is high time that CBC was sold to private interests - American or Canadian or Australian or British or South African or whomever. It matters little just as long as long-suffering Canadian taxpayers are rid of the Mother Corporation Monkey that

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currently sits atop their collective backs. Private enterprise is the engine that drives the economy of this country; it certainly is not the socialism that passes for Canadian culture as infused in the CBC. [*Vancouver Sun*, Friday, 24 October 2003]

Thirdly, a recent report out of Montreal reveals that a 1630 Rembrandt oil painting, *Head of an Old Man in a Cap*, has been given to Queen's University in Kingston, Ontario. It is the latest bequest Alfred Bader, a Milwaukee philanthropist, has made to Queen's.

A bit of background: Mr. Bader arrived in Montreal when he was 17 years old and for the next seven years considered it his home. He was one of the many Jewish children who were shipped out of Vienna, his birthplace, to escape the Nazis during World War Two. In 1941, he applied to Montreal's McGill University but his application was not accepted. The university at the time had a Jew entry quota and the quota was full when he applied. He was denied even though he had passed, rather well, the university's senior matriculation examination. From McGill, Alfred Bader turned to the University of Toronto; it too turned him down. He then applied to Queen's and was accepted.

"Queen's took me in and treated me so wonderfully well. It was the first time in my life I was treated as an equal. If Queen's hadn't admitted me, where would I have gone? What would I have done?" [*National Post*, Thursday, 24 October 2003]

He received his degree in engineering chemistry in 1945 and later, in 1946, a second degree in history. He went to Harvard for his doctorate and moved to the USA in 1950. He then made a fortune in chemicals and assembled an outstanding collection of Dutch art.

In addition to the Rembrandt, Mr. Bader has donated a Sussex, England castle to Queen's. He bought the castle ten years ago. The university's students can study the moated 15th Century estate for a year at a cost of about $20,000. Moreover, Mr. Bader has made donations to the University of Toronto.

Why is this item mentioned here, at this time? For the simple reason that McGill's quota system was and remains a black eye for Canada and Canadians. Although it is acknowledged that most Canadian universities discriminated against Jews in the 30s and 40s in varying degrees, it was not a high water mark for Canadians. Somewhere back in the foggy past, this country proclaimed itself as being a repository of individuals welcomed regardless of race, religion, culture, or age. If that were true, then there ought not to have been any quota for Jews. Question: Was there a quota for Christians? Answer: Probably not.

Discrimination regardless of how it is explained away, remains discrimination.

Mr. Bader is to be applauded most heartily for his gracious donations to Queen's and UofT. Clearly, his heart is compassionate and forgiving for those who closed their doors to him. Bravo to Alfred Bader.

Finally, pity poor British Columbia. During the summer, parts of the province burned brightly and now that autumn has arrived, other parts of the province are flooded. The damage in both cases is large. It will be some time before things return to normal [whatever that is in a province that has such a diversified geography: massive mountains, deep valleys, deserts, rain forests, old growth evergreen forests, deciduous forests, ocean front, salt water straits, mighty rivers, enormous lakes, a large lava bed, and in winter, more snow than can be imagined].

The good news is that Ottawa has kicked in one hundred million dollars to help the province cover the cost of emergency response and recovery expenditures. Those in BC, particularly those affected most by the summer burn, undoubtedly give a hearty thanks to Canadians coast to coast to coast for it is they, and not Ottawa, that produces the money that Ottawa has so graciously dolled out. Now, with some consideration for the summer fires received, BC will seek additional funds to cover the cost of dealing with the flooding. The defence minister is reported to have said that while Ottawa had no official word on federal aid for flood victims, funding was likely.

It is nice to see that Ottawa knows where BC is and is able to recognise that BC suffered greatly these past few months from natural disasters. That same Ottawa, however, has played Dickens' Scrooge to Kelowna, BC.

In an attempt to raise funds for the Kelowna and Area Recovery Society Fund, firefighters decided to sell three hundred T-shirts at fifteen dollars each. Big Bad Ottawa has signalled that it is going after the city's firefighters for the sales tax on the fundraising T-shirts. Victoria, on the other hand, had agreed to forego the provincial sales tax. So, on balance, Ottawa is not taking so kindly an approach to BC; so what else is new. The province, however, does not escape criticism.

Shortly after the fires had been curtailed and people were allowed to return to the ashes of their homes, Victoria paid for a large advertisement in BC newspapers. The idea was to thank the hundreds of men and women - including the military -who faced down the raging flames. The idea had merit but the bumbling bureaucrat who approved the ad's picture was clearly out to lunch.

Two things: first, the picture was of a fireman with a tear running down his cheek; second, the picture was of a New York fireman [think 11 September, or as the Americans prefer, 9/11 scene] and not a Canadian fire-fighter. The fireman in the picture wore the gear of a fireman who fights fires in buildings. The province's bumbling bureaucrat should have known the difference in apparel between a city fireman and a fire-fighter who is battling a roaring forest fire. The apparel is rather different. So, shame on Victoria for being so insensitive to the heroism of Canadians who stepped forward and faced down the summer inferno.

In the meantime, Ottawa giveth and Ottawa taketh away; Victoria just goofs.

Good night, my dear, wherever you are.

Send your comments about Bob's articles to syears@senioryears.com. We will display letters at Talking Back to Bob

Bob Orrick is a private tutor of English grammar, literature, poetry and Canadian history to off-shore youngsters. His pupils hail from such places as Taiwan, China, Japan, Hong Kong, Korea and Venezuela. He was previously in international marketing, was a ministerial assistant to a provincial cabinet minister, spent a few years as a reporter then editor of a community newspaper and enjoyed a career in the Royal Canadian Navy.

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Alfred Bader Award in Organic Chemistry

Sponsored by Alfred Bader
(Established 1988)

The Award will be presented as a mark of distinction and rec scientist for excellence in research in organic chemistry carried out

The funds to endow this award have been provided by Alfred Bad administration of these funds remains with The Canadian Chemistry. In the event that The Canadian Society for Chemistry use the funds for this purpose, they will revert to the Chemistry D Queen's University.

Deadline: July 1

Award: Framed Scroll, $3,000 cash; and up to $500 for trav to present the lecture.

Eligibility: The scientist who has not reached the age of January 1 of the year in which the nomination becon

Application: Please submit one original as well as 4 copies of th package to the Conferences & Awards Coordina Canadian Society for Chemistry.

The award shall be presented at the annual Canadi Chemistry Conference & Exhibition. The recipient wi to present an award lecture. A paper based on the should be submitted to both *Aldrichimica Acta* a *Chemical News/L'Actualite chemique canadienne*.

All nominations will remain in force for three years are responsible for keeping the record of the nomin and complete.

Selection Committee CSC Director of Awards as Chair.

Three persons appointed by the Organic Chemistry serving for three-year terms.

No two members of the Committee may be fro organization or institution and at least one must be university sector. No member of this Committee, o Chairman, may serve on any other CSC or CIC Aw Committee while serving on this Committee.

The award shall be presented annually unless th considers that no suitable candidate has been nomin

Submit nominations to: Julie Trohon

Conferences & Awards Co-ordi
The Canadian Society for Chem
Suite 550, 130 Slater Stree
Ottawa, ON K1P 6E2
Tel: 613-232-6252 x235
Fax: 613-232-5862
E-mail: jtrohon@cheminst.

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DR. ALFRED BADER: ŠTĚDRÝ PATRON ČESKÝCH CHEMIKŮ

Světově známý podnikatel, chemik, multimilionář, kunsthistorik, self-made man, zakladatel fi Aldrich, filantrop, sběratel vlámských mistrů, podporoval již od šedesátých let české chemiky ekonomicky, jak bylo možno. Důvodem může být i to, že se sám považuje za Čecha.

Dr. Alfred Bader, který se narodil 28. 4. 1924 ve Vídni v položi rodině Elisabethy hraběnky Serényiové a Alfréda (rytíře) Badera, rané mládí prožil zčásti na Moravě. Ve věku 14 let byl poslán do aby unikl nacistické persekuci. Po začátku války byl deportován Kanady a internován. Po propuštění studoval chemii na Queen's University, Kingston, Ontario. Po ukončení studia v r. 1945 odeše studijní pobyt na Harward, kde pracoval v oblasti chemie chinon Louisem Fieserem a v r. 1950 získal titul PhD. Poté Dr. Bader na u Pittsburgh Plate Glass Company v Milwaukee, jako výzkumník oddělení barev. V r. 1954 zúročil patent na přípravu bis-fenolové kyseliny, za který společnost PPG získala milion dolarů od firmy Johnson Wax - což se stalo prvým úspěšným obchodním vítězstv mladého chemika.

Již v době práce na svém doktorátu měl problémy s nákupem chemikálií v drobném, neboť velké chemické firmy se nechovaly k "malým zákazníkům" příliš vs Rozhodl se proto se svým přítelem právníkem založit firmu Aldrich Chemical Copany, ve které n prodávali chemikálie připravené studenty ve školním praktiku. Jméno firmy pochází od jména dí jeho přítele, hodili si tehdy čtvrťákem o to, po čí dívce firmu pojmenují; Bader prohrál. Přestože počátku neměl obchodní zkušenosti a i 500 dolarů, které potřebovali na založení firmy jim dělal potíže, firma se rozrostla a stal se z ní světový gigant.

V šedesátých až osmdesátých letech podporoval české chemiky tím, že od nich barterovým způsobem odkupoval "přebytečné" vzorky chemikálií a poskytoval jim za to produkty fy Aldrich, byl jeden ze způsobů, jak Dr. Bader vybudoval během let katalog o téměř 10 tisíci položek (ale způsob, kterým se čeští chemici dostávali k tolik potřebným zdrojům, které jim těžkopádné plán dovozních organizací blokovalo práci asi tak, jako Baderovi při práci na jeho doktorátu). V roce se fa Aldrich spojila se společností Sigma sloužící biochemikům a stala se tak gigantem i v oblas biochemie. Aby toho nebylo dost, Dr. Bader založil v roce 1968 světoznámý časopis Aldrichimica který se stal užitečnou pomůckou chemiků a je jí dodnes (jeho "impakt faktor" 7,846 by mu mo závidět leckterý "renomovaný" časopis) a jemuž vtiskl nepominutelný ráz tím, že na jeho titulní stranách zpočátku zveřejňoval reprodukce obrazů vlámských mistrů ze své početné, světoznám sbírky.

Dr. Bader se stal jedním z nejúspěšnějších a nejznámějším chemiků na vědeckém i obchodní Vědecky se soustředil na uplatnění soudobých metodik ve výzkumu historických obrazů, o čemž i monografii a přednášel po celém světě. Proslýchá se, že i v Národní galerii v Praze kritizoval p některých obrazů.

Jeho filantropická aktivita přerostla po roce 1989 v několik významných forem. Dr. Bader ust finanční jistiny (vždy ve výši cca milion dolarů), z jejichž úroků jsou hrazena "navždy" stipendia výhradně českým studentům chemie na významných světových universitách jako je Harward University, Imperial College of London, University of Pennsylvania a Columbia University. Alfred se svou manželkou Isabelou zřídili (a financují) na Masarykově universitě v Brně, v naší zemi za neobvyklou profesuru, "Josef Loschmidt Chair". Dr. Bader rovněž poskytuje stipendia i studentů vlámského malířství a judaistiky. Vrcholem angažovanosti pro českou chemii bylo zřízení prestiž Ceny Alfreda Badera která je každoročně udělována od roku 1994 mladému českému organické chemikovi do 35 let a je spojena s udělením finanční prémie ve výši 100 tisíc korun (u které dr. m.j. velmi těžce nese, že musí být zdaněna daní z příjmu). V roce 2001 byla zřízena a r. 2002 p udělena i Baderova cena za bioanorganickou a bioorganickou chemii. Finanční prostředky pro ty poskytuje Dr. Bader a uděluje je Česká společnost chemická na základě rozhodnutí příslušné

dvanáctičlenné komise, které pracují pod předsednictvím prof. Oldřicha Palety (VŠCHT Praha) prof. Tomáše Trnky (PřF UK Praha). Přihlásit se do konkursů může každoročně kterýkoliv český splňující požadavky statutu ceny; chemika může přihlásit i škola či pracoviště. Informace o stipe a cenách podá sekretariát České společnosti chemické (222 210 184 či 221 082 383).

V prvém roce soutěže o cenu Alfreda Badera v roce 1994 zvítězil RNDr. Ivo Starý, CSc., z Úst organické chemie a biochemie AV ČR, Praha, v dalších pak: 1995 RNDr. Martin Smrčina, CSc., z Katedry organické chemie Přírodovědecké fakulty Univerzity Karlovy, Praha, 1996 Dr. Ing., Vlad Havlíček, z Mikrobiologického ústavu AV ČR, Praha, 1997 Ing. Pavel Lhoták, CSc., z Ústavu orga chemie Vysoké školy chemicko-technologické, Praha, 1998 Ing. Michal Hoskovec, CSc., z Ústavu organické chemie a biochemie AV ČR, Praha, 1999 Ing. Michal Hocek, CSc., z Ústavu organické a biochemie AV ČR, Praha, 2000 Dr. Ing., Vladimír Církva, z Ústavu chemických procesů AV ČR, 2001 doc. RNDr., Milan Pour, PhD, z Farmaceutické fakulty UK, Hradec Králové. V roce 2002 byl vyznamenání RNDr. Radek Marek, PhD, z Národního centra pro výzkum biomolekul, PřF Masaryk univerzity Brno, za bioorganickou a bioanorganickou chemii a Mgr. Štěpán Vyskočil, PhD, z Kate organické a jaderné chemie PřF University Karlovy, Praha, za chemii organickou. Tím byl mezi m talentované chemiky rozdán onen prvý milion korun. Cena je jako každoročně předávána na konferenci ČSCH a ta poslední byla předána 22. listopadu na Konferenci o organické, bioorganic farmaceutické chemii v Nymburku.

Prestiž těchto ocenění spočívá nejen v úrovni soutěže ale i v tom, že podobné ceny A. Badera za analogických podmínek udělovány např. v USA, Kanadě a Velké Britanii. Dr. Bader tak hmata pomáhá těm nejlepším, nejen významnou částkou (která odpovídá přibližně základnímu ročním mladého učitele na vysoké škole či výzkumníka v ČR), ale i tím, že jim tak propůjčuje renomé, uznávané v celém odborném světě. Česká společnost chemická, jako nejstarší a největší profes organizace chemiků v ČR (a jedna z nejstarších na světě) propůjčuje ceně svůj odborný kredit a záštitu, podobně jako sesterské společnosti v zahraničí.

Dr. Bader, přestože česky umí jen několik slov, zdůrazňuje své české kořeny a je na ně hrdý. toho, že přispěl k znovuobjevení zásluh českého rodáka Josefa Loschmidta (Bader rád zdůrazňu doklad z fary v Počernech u Karlových Var znějící na jméno Lošmíd) o chemii - např. o objev str benzenu, podporuje Čechy, zvláště mladé, kde jen může. Za své zásluhy o rozvoj české chemie Dr. Bader odměněn nejvyššími vyznamenáními České společnosti chemické. Podpora mladých odborníků v naší republice od Dr. Badera by jistě zasloužila i veřejného uznání.

Autor je místopředseda České společnosti chemické a president Asociace českých chemických společností

PAVEL D.

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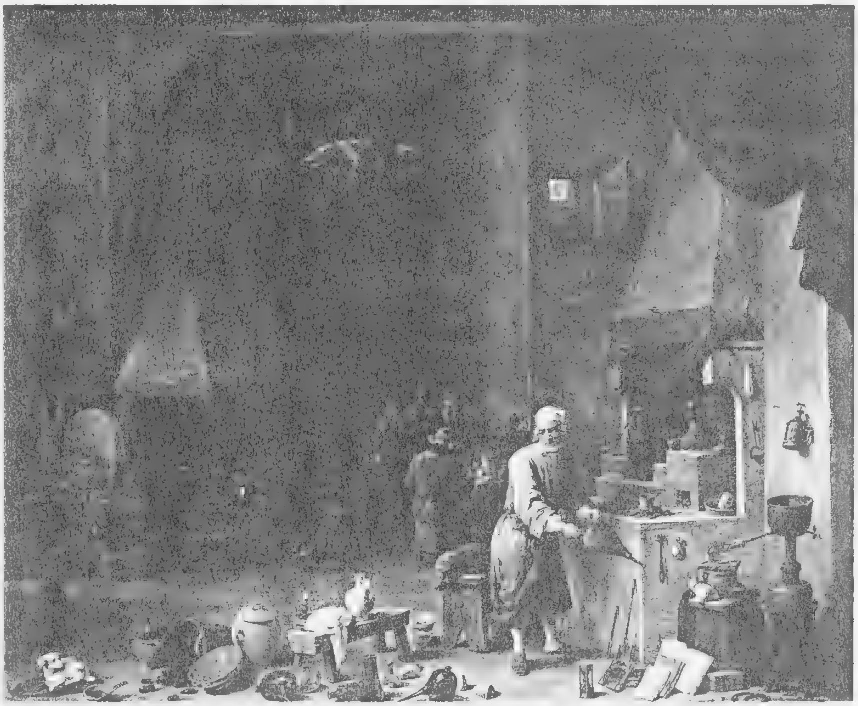
obsah | osobnosti

News from the Beckman Center



Interior of a Laboratory with an Alchemist, *by David Teniers II, from the Eddleman Collection at CHF. This stunning example of 17th-century fascination with alchemy among Dutch and Flemish artists depicts the glassware, earthenware, and apparatus of the alchemist, including a "Turk's cap" in the lower right corner. The reptile suspended from the ceiling was a popular image in such paintings, leaving art historians to puzzle over its possible significance.*

Brown Bag Luncheons*

The Alchemist Transformed

Despite its current association with magic, alchemy in the 17th century consisted of the kinds of carefully recorded experiments and observations that are basic to scientific chemistry. The wealth of treatises printed in the 17th century testifies to the strong interest in the craft throughout Europe. Only in Flanders and Holland, however, were a significant number of paintings on the theme produced. These paintings were the subject of a BBL by Jane Russell Corbett on the transmutation of the alchemist in 17th-century Netherlandish art.

The seminal design is a 1558 drawing by Pieter Brueghel showing an alchemist at the hearth, dropping his last gold coin into a crucible. Behind him, his gaunt wife displays her empty purse while the children play in the bare cupboards. An assistant wears a fool's cap and ass's ears, while another reads a book opened to a page captioned "Al-ghemist," a pun on the Dutch words for "all is lost" and "all is dung." We see the family again in the background, being accepted into the poorhouse. While nearly all subsequent alchemist paintings are based on this composition, later artists gradually eliminate the biting satire on the folly and misfortune of the amateur alchemist.

Although these paintings are realistic, they are probably not factual descriptions of laboratories. The illustrations of equipment are often accurate, but the composition and settings often resemble those in other genre subjects by the same artist, subjects that carry negative associations.

In Flanders, David Teniers II of Antwerp (1610–1690) produced scenes like Brueghel's, as in the *Alchemist* in the Philadelphia Museum of Art's Johnson Collection (1645). The first examples in Holland are by Adriaen van Ostade of Haarlem, among them the 1661 *Alchemist* in London's National Gallery. The decay, neglect, and disorder in these paintings expose the alchemists as negative moral *exempla*. We also see many symbols of mortality, like hourglasses, snuffed candles, and books. Cornelis Bega's *Alchemist* in the Fisher Collection has a bared leg and tattered clothes, which indicate poverty. Hendrick Heerschop's *Alchemist's Explosion* in the Fisher Collection emphasizes folly by showing the danger to which the alchemist's carelessness exposes his family. Another Heerschop *Alchemist*, in the Alfred Bader Collection, associates the pipe-smoking subject not only with transience but also with charlatanism, as the nickname for greedy, uninitiated amateurs was "puffer." The owl in the Johnson Collection *Alchemist* by Teniers was a symbol of stubborn blindness.

Not all the symbolic meanings for unusual objects are known. The ubiquitous stuffed reptile or fish hanging from the ceiling has no clear meaning. It could be a symbol of the element of water or even fire, if it is a salamander. Chameleons were great symbols of the process of transmutation. The popular cow's skull could simply be raw material, since bone ash was incorporated into clay vessels.

While the glassware and equipment itself is depicted realistically, contemporaneous manuals described much more complex apparatuses, indicating that we may be seeing amateur or working alchemists rather than adepts. An occasional alchemical portrait shows the more advanced vessels that typically appear in manuals of the time.

The genus of paintings of alchemists contains several species, among them iatrochemists, amateurs, and scholars. Over the 17th century several postitive types emerged, such as medical alchemist. Wijck, Rijckaert, and van Helmont produced scenes where the studious medical alchemist is surrounded by paraphernalia that includes not only vessels and books but also globes and anatomical models. The disorder is more picturesque than indicative of neglect, decay, and immorality.

The fascination with and skepticism about chemistry reflected in these paintings was consistent with attitudes expressed by Bacon, Albertus Magnus, Chaucer, Petrarch, and Sebastian Brandt.

Lloyd DeWitt
University of Maryland, College Park
2001–2002 Price Fellow

THE BADER INITIATIVES

Through the generosity of Alfred and Isabel Bader, the Foundation has undertaken several initiatives in areas of their particular interests. These initiatives, which the Baders have seeded with the Foundation, have an impact beyond the fields of Chemistry, Art History or Revitalization of the Jewish Community in the Czech Republic. As Milena Bartlová, the expert reviewer of applications to the Bader Awards for the Research of Baroque Painting, has noted, this award "has contributed to creating a normal, civilized environment in this country" where competition is now open, fair and merit-based.

Bader Awards for the Research of Baroque Painting

A noted collector of Baroque paintings, Dr. Bader worked with the Foundation to establish the Bader Awards for the Research of Baroque Painting in 1994. These awards are presented annually to three worthy Czech students of Baroque painting. Grants of $5,000 are provided to each winner to support short-term research projects to be undertaken outside the Czech Republic. The selection process is overseen by Dr. Milena Bartlová and Dr. Tomáš Vlček of the Czech Institute of Art History, with the assistance of the Association of Art Historians of Bohemia and Moravia.

Štěpánka Mullerová of Palacky University in Olomouc, **Petr Ingerle** of Masaryk University in Brno, and **Markéta Baštová** of Charles University in Prague were the 1995 award winners.

Alfred Bader Award for Young Chemists

In 1995, the second annual Alfred Bader Award for young Chemists was presented to **Dr. Martin Smrčina**, of the Department of Organic Chemistry of Charles University, Prague. The Alfred Bader Award for Young Chemists is administered through the Czech Chemical Society and the Foundation for a Civil Society. This 100,000 kc award supports the work of a Czech chemist under the age of 35 whose research and publications are recognized as outstanding. The winner is selected by a committee headed by Dr. Oldřich Paleta of the Prague School of Chemical Technology.

The Foundation for a Civil Society is also pleased to assist the Baders in other initiatives. The Foundation provided a small grant to the Tolerance Foundation's Families after Holocaust project, which provides psychotherapy to survivors of the Holocaust and their families. The Foundation carried out a country wide competition for Chemistry students to participate in an international conference, The Loschmidt Symposium, in Vienna, Austria. The Bader Ph.D. Fellowships for Czech students of Chemistry at Harvard University, Columbia University, the University of Pennsylvania and Imperial College London are also among the Bader Initiatives assisted by The Foundation for a Civil Society.

The Bader Initiatives are made possible through the generosity of Alfred and Isabel Bader

Isabel and Alfred Bader

THE BADER INITIATIVES

PROFILE

Dr. Alfred Bader

Alfred and Isabel Bader came to The Foundation for a Civil Society (then the Charter 77 Foundation -- New York) in 1991 to discuss how they could help support initiatives in the Czech Republic about which they felt strongly. Dr. Bader is a founder of Aldrich Chemical Co., one of the world's largest fine chemical companies; he is also a passionate collector of Baroque paintings, and a man of deep religious belief. With strong family ties to the Czech Republic, he and his wife Isabel work with the Foundation to support concerns that are closest to them: Baroque Art, Jewish Life and Chemistry.

We first met Dr. Bader in 1991 and we are extremely pleased that we are finally able to hold competitions like the Alfred Bader Award for Young Chemists, the Loschmidt Competition or the Bader Awards for the Research of Baroque Painting in an open, fair, and not politically motivated environment. The best people CAN win!

Loschmidt Symposium Stipend Winners

Hana Burešová
Jan Havliš
Pavel Kosina
Tomáš Kučera
Přemysl Lubal
Jaromír Soušek
Jaroslava Šibrová
Michal Štorek
Miroslav Terinek
Alena Tokárová

For participation at the
Loschmidt Symposium in Vienna, Austria
for young students of Chemistry

Le Comité du Chapitre étudiant de l'Université de Sherbrooke de gauche à droite. Première rangée: Mylène McLaughlin, Ian Thibault, Stéphane Ouellet. Deuxième rangée: Martin Desrosiers, Guillaume Bouvier, Mathieu Filion, Pascal Hebert. Absent: Julie Blanchaud, Taraneh Sopahsalari, Steve Pelletier.

La section étudiante de l'Université de Sherbrooke a débuté son mandat et la défense de son titre du mérite des sections étudiantes de la SCGCh grâce à son esprit d'initiative et de créativité dans le cadre de la programmation des activités techniques et sociales. La section étudiante, en collaboration avec les étudiants a organisé des conférences, des [illegible] activités sociales et un banquet. De plus, [illegible] prévoit continuer dans la même lignée d'ici la fin du mois de septembre 1996. Lors d'une des conférence, nous avons eu le plaisir de recevoir M. **Alain Ferland**, président directeur d'Ultra[illegible] Canada Inc. et le titre de la conférence était [illegible] perspective internationale : le raffinage dan [illegible] Montérégie la Régionale [illegible] (OIQ).

Le comité du chapitre étudiant de l'Université de Sherbrooke est très fier et honoré de recevoir ce titre et espère passer le flambeau au prochain comité.

Call for Applications

Pestcon Graduate Scholarship

The Chemical Institute of Canada offers the Pestcon Graduate Scholarship in support of post-graduate work in pesticide and contaminant research. Its value is $3,000. The deadline for applications is **March 1, 1997**.

The Pestcon Graduate Scholarship was established in 1987 from surplus funds of the Sixth International Congress of Pesticide Chemistry.

The scholarship is open to Canadian students (including landed immigrants) interested in graduate study in any area of pesticide and contaminant research including alternative pest control strategies. Preference will be given to students already actively engaged in a research program i.e. in their second year of a PhD program. Applications must be submitted in writing before March 1, 1997, using the Pestcon Scholarship Application Form and providing a curriculum vitae, a brief description (500 words or less) of the research project undertaken and the progress to date. Applications must also be accompanied by an official transcript of the academic record of the candidate. Applications must include the name and address of their supervisor and one other person who they have asked to provide a confidential assessment of their ability to conduct research.

The name of the scholarship holder will be announced prior to June 1, unless the Selection Committee feels that no suitable candidate exists.

Payment of the scholarship, in the amount of $3,000, will be made in two instalments of $1,500 each, on October 1 and January 1, on notification from the supervisor that the student is making satisfactory progress.

Alfred Bader Scholarships

The Alfred Bader Scholarships, which are administered by the Canadian Society for Chemistry, are presented as a mark of excellence for achievement in organic chemistry or biochemistry by undergraduate students completing their final year of study in an honours' program. A maximum of three awards are offered annually. Nominees must be members of the Canadian Society for Chemistry and continuing in a graduate program in chemistry or biochemistry at a Canadian university. Nominations shall include: a copy of the honours' research project report; a statement from the research supervisor describing the student's contribution at the academic and extracurricular levels; a second letter of reference; and a transcript of the student's academic record, all in quadruplicate. The next deadline for nominations is **May 15, 1997**.

The Bio-Méga/ Boehringer Ingelheim Award for Organic or Bioorganic Chemistry

The Canadian Society for Chemistry offers an award in organic or bioorganic chemistry for PhD Students.

It shall be awarded to a Canadian citizen or landed immigrant whose PhD thesis in the field of organic or bio-organic chemistry was formally accepted by a Canadian university in the 12-month period preceding the nomination deadline of **February 1** and whose doctoral research is judged to be of outstanding quality.

The awardee shall receive a scroll and a cash award of $2,000. The award shall be presented at the annual conference of the Canadian Society for Chemistry, at which the awardee shall present a lecture. Reasonable travel expenses for the awardee may be provided if required. The awards shall be made annually, unless the Selection Committee considers that no suitable candidate has been nominated.

Nominations for the award shall be made in writing, through the Program Manager, Awards, of the Canadian Society for Chemistry, over the signatures of three professional members of The Chemical Institute of Canada. Nominations shall be submitted by February 1 of the year preceding the award year, and shall be accompanied by the curriculum vitae of the nominee, a synopsis (no longer than ten (10) double-spaced typewritten pages) of the doctoral thesis, and two (2) letters from independent experts in the field assessing the significance of the thesis.

The Ichikizaki Fund for Young Chemists

The Ichikizaki Fund for Young Chemists provides financial assistance to young chemists who are showing unique achievements in

RSC news

[illegible]

A Perkin Division symposium, held in association with Merck, Sharp and Dohme Research, entitled Contemporary organic synthesis, *will take place at the University of Manchester at 10.30 on 17 March 1994. The meeting will include the Simonsen lecture by Prof S. V. Ley (Cambridge).*

Details from S. S. Langer, Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN.

[illegible]

The Bioorganic Subject Group of the Perkin Division is holding a symposium on Physical methods in bioorganic chemistry *at the Scientific Societies' Lecture Theatre, London, on 21 March 1994.*

Details from Dr D. Brundish, Ciba-Geigy Research Centre, Wimblehurst Road, Horsham, West Sussex RH12 4AB; tel: 0403-272827 x3358.

Public symposium

Details of the public symposium, Murder, magic and medicine, *to be held at the 1994 annual chemical congress in Liverpool can be found on p142.*

Council

A report on Council and boards appears on p142.

Irvine review lectures

Around 300 honours and research students from all over Scotland attended the annual Irvine review lectures held at St Andrews University last November. Speakers from academe and industry (pictured above with some of the students) lectured on the topic Advances in electrochemistry.

The lectures were organised by the RSC Tayside Section and the St Andrews' chemistry department with financial support from Glaxochem, the Manchester Charitable Trust and the RSC. ☐

Marriott studentship

Concerns over the public image of the profession and science of chemistry are growing. The RSC is keen that as many chemists as possible are familiar with communication techniques and that the profession is well represented in the ranks of the media.

Thanks to the continuing generosity of the Marriott Bequest trustees, we are able once again to offer a young member of the RSC a taste of scientific publishing this summer. The prime aim of the Marriott fellowship is not to turn chemists into budding journalists, but to give them the chance to see some of the opportunities available in scientific publishing without committing themselves.

The ideal candidate will be a young RSC member who has not yet completed his or her education (probably towards the end of their degree or postgraduate course). The person selected will spend approximately eight weeks with the RSC's news publications department in London, working with the team that produces *Chemistry in Britain* and *Education in Chemistry*. The Marriott Bequest trustees have provided a bursary of £1400 to support the summer fellowship.

Those who would like to be considered for the 1994 placement should send their CV, together with a covering letter explaining why they feel they would benefit from the experience, and enclosing samples of written work, to the editor, *Chemistry in Britain*, The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN. The closing date is **18 March 1994** and shortlisted candidates will be interviewed around Easter (please provide both home and term time contact addresses and telephone numbers). ☐

Bader award

This award was founded by an endowment from Dr Alfred Bader. It is made annually for eminence in organic chemistry and includes a monetary prize of £2000. There is no restriction on age, but nominees must not hold or have held professorships in the British Isles.

The major part of the nominee's work must have been carried out in an academic institution in the UK or Republic of Ireland and the person must currently work in such an institution.

Applications or nominations for the next Bader award should be sent to the international affairs officer, RSC, Burlington House, Piccadilly, London W1V 0BN, to arrive not later than **1 April 1994.** ☐

Good news '93

What was chemistry's biggest achievement during 1993 where you work? Did it create or improve a product or process, help the environment, or create jobs? The RSC would like to hear about 1993's UK chemistry success stories. The object is to publicise examples where chemistry plays a key role in creating wealth and improving quality of life. Sometimes the chemistry may be new, more often it will have been used in a new way or contributed to an incremental improvement.

Write and tell the Society about the innovation and its impact. We will, with your agreement, pass the good news on. Send your ideas to Good News 93, RSC, Burlington House, Piccadilly, London W1V 0BN, to arrive not later than **31 March 1994**.

Landfill monitoring

The West Midlands Region of the RSC's Analytical Division is arranging a seminar on the *Analytical challenges of landfill monitoring* at Loughborough University on 19 April 1994.

The objective is to focus on the difficulties and concerns faced by the waste disposal industry and regulators in attempting to reduce the risks and control environmental pollution.

Details from D. B. Perry, 41 Hobart Drive, Walsall WS5 3NJ; tel: 0922-652258. ☐

File

AWARDS / LAURÉATS

The Canadian Society for Chemistry

Alcan Award

Robert H. Morris, MCIC, University of Toronto

Sponsored by Alcan International Limited, this award is for a distinguished contribution in inorganic chemistry or electrochemistry.

Morris' research has focused on the structures and reactions of dinitrogen and hydride complexes of the chromium and iron group metals. He is most recognized for his work on the discovery and study of transition metal dihydrogen complexes. Nuclear magnetic resonance is a key spectroscopic tool in this work. He has made contributions to the chemistry of π-arene, thiolato and quadruply-bonded complexes of molybdenum and tungsten.

Award Lecture: *Intermediates in the Homolytic and Heterolytic Splitting of Dihydrogen by Transition Metal Complexes.*

La Société canadienne de chimie

Prix Alcan

Robert H. Morris, MCIC, University of Toronto

Parrainé par Alcan International Limited, ce prix est attribué pour une distinction dans les domaines de la chimie inorganique ou de l'électrochimie.

Sa recherche est axée sur les structures et les réactions des complexes de dinitrogène et d'hydrure des groupes métalliques de chrome et de fer. Il est surtout connu pour la découverte et les travaux sur les complexes des métaux de transition d'hydrogène. En utilisant la spectroscopie de la résonance magnétique nucléaire il a fait des progrès importants dans la chimie des complexes de molybdène et de tungstène.

Conférence: *Intermediates in the Homolytic and Heterolytic Splitting of Dihydrogen by Transition Metal Complexes.*

The Alfred Bader Award in Organic Chemistry

Donald Arnold, FCIC, Dalhousie University

This award is a mark of excellence in research in organic chemistry by a scientist who shall not have reached the age of 60 by January 1 of the year of nomination.

Arnold is a leader in the field of organic photochemistry. His use of a broad range of techniques to study problems in organic photochemistry has enabled him to cross the barrier between organic and physical photochemistry and has contributed to the virtual disappearance of the barrier. These techniques include electrochemistry, electron spin resonance spectroscopy, single-photon counting lifetime measurements, chemically induced dynamic nuclear polarization, quantum yields, pK measurements and mass spectrometry.

Award Lecture: *Radical Ions in Photochemistry.*

Prix de chimie organique Alfred-Bader

Donald Arnold, FCIC, Dalhousie University

Ce prix est attribué pour une distinction dans le domaine de la recherche en chimie organique par un scientifique qui ne doit pas avoir atteint l'âge de 60 ans avant le 1 janvier de l'année de la mise en candidature.

C'est un chef de file dans le domaine de la photochimie organique. Pour faciliter l'étude de problèmes dans la photochimie organique il a développé une multitude de techniques qui ont presque éliminé les barrières entre la photochimie organique et la photochimie physique. Ces techniques comprennent l'électrochimie, la spectroscopie de résonance paramagnétique électronique, les mesures du temps de vie en faisant appel aux photons uniques, la polarisation nucléaire dynamique induite chimiquement, les rendements quantiques, les mesures pK et la spectroscopie de masse.

Conférence: *Radical Ions in Photochemistry.*

Aerial view of the City of Guelph. Just an hour's drive west of Toronto, the city is home to over 90,000 people.

The home of Col. John McCrae, the author of "In Flanders Fields", in Guelph.

AWARDS / LAURÉATS

Clara Benson Award

Helle Tosine, Government of Ontario, Environmental Bill of Rights Office and Science and Technology Branch

Sponsored by the Canadian Council of University Chemistry Chairs (CCUCC), this award is for a distinguished contribution to chemistry by a woman.

Tosine is currently responsible for implementing the Environmental Bill of Rights for the Government of Ontario and establishing policies, programs and priorities for the Ministry of Environment and Energy. She has six years' experience with Environment Canada in analytical research and 14 years with Environment Ontario, where she established the Dioxin Laboratory and Drinking Water Analysis Laboratory. She also developed various air regulations including the Clean Air program.

Award Lecture: *The Environment: from a Fringe Research Area to Big Business.*

Prix Clara-Benson

Helle Tosine, Gouvernement de l'Ontario, Bureau de la Charte des droits environnementaux et Direction des Sciences et de la Technologie

Parrainé par le Conseil canadien des présidents des départements de Chimie, ce prix est attribué à une femme chimiste pour sa distinction dans le domaine de la chimie.

Elle est présentement responsable de la mise en application de la Charte des droits environnementaux pour le Gouvernement de l'Ontario; elle établit la politique, les programmes et les priorités basées sur la science et la technologie, pour le Ministère de l'environnement et de l'énergie. Elle a travaillé pendant 6 ans avec Environnement Canada dans la recherche analytique. Pendant ses 14 ans avec Environnement Ontario elle a établi le Laboratoire d'analyses de dioxine et le Laboratoire d'analyses d'eau potable. En plus, elle a développé plusieurs règlements qui visent à contrôler la pureté de l'atmosphère, y compris le programme «Opération air pur».

Conférence: *The Environment: from a Fringe Research Area to Big Business.*

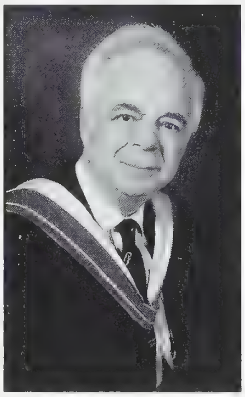
The Fisher Scientific Award

Harold Schiff, York University

Sponsored by Fisher Scientific, this award is for a distinguished contribution in analytical chemistry.

Schiff's research activities include making laboratory and atmospheric measurements of interest to atmospheric chemistry. He was the first to measure the concentration of NO in the stratosphere from high altitude balloons. He built one of the first mass spectrometers in Canada, developed sensitive chemiluminescent detectors and was the pioneer in applying tunable diode laser spectroscopy to atmospheric measurements.

Award Lecture: *Musings of an Atmospheric Chemist Trying to Understand why he would Win an Analytical Chemistry Prize.*



Prix Fisher-Scientifique

Harold Schiff, York University

Parrainé par Fisher-Scientifique, ce prix est attribué pour une distinction dans le domaine de la chimie analytique.

Entre autres, sa recherche porte sur la simulation en laboratoire de modèles atmosphériques. Il est le premier à avoir mesuré la concentration de NO dans la stratosphère en faisant appel aux ballons de haute altitude. Il a construit un des premiers spectromètres de masse du Canada, et a développé des détecteurs chimiluminescents sensibles. Il est un pionnier dans l'application de la spectroscopie au laser à diode accordable pour les mesures de l'atmosphère.

Conférence: *Musings of an Atmospheric Chemist Trying to Understand why he would Win an Analytical Chemistry Prize.*

The R.U. Lemieux Award for Organic Chemistry

Thomas T. Tidwell, MCIC, University of Toronto

Sponsored by the Organic Chemistry Division, this award is for a distinguished contribution in organic chemistry.

After previous studies of steric crowding, free radicals, carbanions, and electrophilic additions, Tidwell's current research interests now lie in the areas of ketenes and destabilized carbocations. In 1992, his research group achieved the first preparation of a stable and persistent 1,2-bisketene, and is now engaged in the further study of this family and of their practical applications. In the area of destabilized carbocations their investigations now include the phenomenon of antiaromaticity in carbocations, and the behaviour of ion pairs of these species as revealed by salt effects.

Award Lecture: *Ketenes and Bisketenes: Organic Chemistry in Microcosm.*

Prix de chimie organique R.U. Lemieux

Thomas T. Tidwell, MCIC, University of Toronto

Parrainé par la Division de chimie organique, ce prix est attribué pour une distinction dans le domaine de la chimie organique.

Ces premiers travaux portent sur les études de la compression stérique, des radicaux libres, les carbonions et l'addition électrophilique. Ses travaux portent actuellement sur les cétènes et les carbocations déstabilisés. En 1992 son groupe de chercheurs fut le premier à préparer le 1,2 - bisketène stable. Le groupe poursuit les études dans cette famille et ses applications. Dans le domaine de carbocations déstabilisés leur recherche comprend le phénomène de l'antiaromaticité dans les carbocations et la conduite des paires d'ions de ces espèces tel que démontrée par les effets de sels.

Conférence: *Ketenes and Bisketenes: Organic Chemistry in Microcosm.*

PRESIDENT'S REPORT

Helen Bader looked upon the world with a certain vigor. She celebrated the beauty she saw in people and nature through her love of art, dance and classical music. She relentlessly pursued action to alleviate the distress of those who were hungry, homeless, deprived, uneducated, unhealthy or alone and without hope.

The Helen Bader Foundation, Inc. is a tribute to my mother's spirit and continues her efforts in program areas which reflect her life's interest and work. These are interests shared by my family and me as well as the Foundation's Board of Directors and staff.

This past year, the Helen Bader Foundation was researched, designed and implemented. We began our grant activities in November of 1991, formally announcing the types of grants the Foundation was pursuing as well as the process for making grant requests.

Now that we are off the ground, we have systematically begun to develop and fine tune the Foundation's four program areas.

The Families and Children at Risk area, the largest program in terms of dollars, has come the furthest. It began to take shape when the Board of Directors agreed to concentrate on primary prevention as a strategy for helping families and children at risk. "Prevention," however, is a word which carries many meanings. The process of pin-pointing the Foundation's definition forced us to explore the many facets, implications and expected outcomes of a prevention agenda. We've arrived at a definition of prevention which is elaborated upon in the *Families and Children at Risk* section of this report.

The families who benefit from the programs we support are affected by a vast number of influences which potentially put them "at risk." The Foundation's Board has identified some of these to be education, employment, public policy and race relations. Each of these issues could easily be program areas unto themselves. There is no way a foundation our size can address all of these topics in a cohesive, pragmatic manner. Instead, I've recommended that we focus our attention on core prevention activities — prenatal care, parenting education, early childhood development, and early adolescent intervention — and that we approach these activities with sensitivity to

PRESIDENT'S REPORT

the above external influences. We're taking a high-posture approach to grantmaking, which includes the design of new programs, evaluation of existing programs and advocacy for successful programs.

The Families and Children at Risk area has been greatly advanced with the introduction of Bob Pietrykowski as the Program Officer. Bob brings to the Foundation a level of understanding and expertise which allows us to effectively solidify our grant requirements and put the program area into action. Bob leads the task of reviewing applications, visiting sites and holding informed discussions about issues concerning today's families. In all, 26 grants were approved by the board for Milwaukee area organizations.

Our second focus, *Alzheimer's Disease and Related Dementia,* took its first step forward on a cold November Sunday in 1991 when ground breaking ceremonies were held for the Helen Bader Center at the Milwaukee Jewish Home. This state-of-the-art residential and research facility for the care and treatment of Alzheimer's disease victims is scheduled to open in the fall of 1993.

In May, I was pleased to announce that Robin Mayrl would join our staff as the Program Officer of the *Alzheimer's Disease and Related Dementia* grants area. Coming to us from her position as Director of Milwaukee County's Department on Aging, Robin's depth of experience in working with older adults is surpassed only by her commitment to quality care and research-based, collaborative programs. With Robin on board, I'm confident that this grants area will set its final direction and be fully functional by December of this year.

Milwaukee Jewish Education is our third focus area and concentrates on two programs: the Helen Bader Scholarship Fund and the Excellence in Jewish Education Program. The Scholarship Fund, which is a program of the Milwaukee Jewish Federation, provides need-based grants to students at four Milwaukee area schools. The Excellence in Jewish Education Program awards grants to schools from day care through university level for development of educator knowledge, instructional practices, and curriculum. In 1992, we published a "request for proposal" to solicit grant requests from the education community. The response was outstanding, exemplifying the overwhelming need which exists in this area.

The final focus area, *Jewish Philanthropy*, has been the most difficult to define up to this point. It's not yet geographically focused, although we intend to concentrate our contributions on support of resettled Soviet and Ethiopian Jews in Milwaukee and Israel. We plan to research and help develop the now lacking, but greatly needed, community systems to accommodate the influx of people in search of new homes.

Zachary Harris, the most recent addition to our staff as Program Associate, will coordinate both the *Milwaukee Jewish Education* and *Jewish Philanthropy* grants areas. Zachary comes to us as a recent graduate of the University of Pittsburgh Law School. His extensive studies and professional experience have taken him from Madison, Wisconsin and Washington, D.C. to Jerusalem, Israel.

Our vision for the coming year is clear. We intend to set each of the four program areas fully into action, advance the development of relationships with policy makers, continue the education of the public about the Foundation's mission, and solidify the role of the Foundation as a community leadership organization. We look forward to the challenges and rewards which face us.

Daniel J. Bader
President

GRANTS

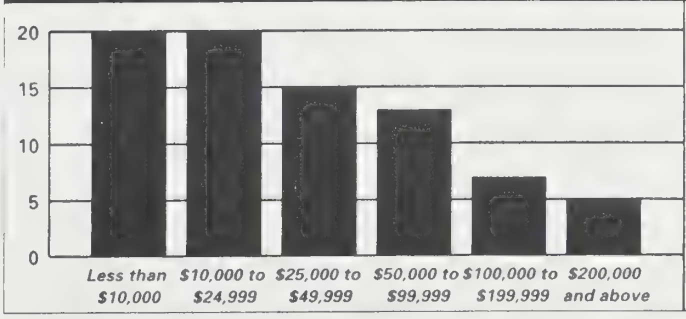
SUMMARY

TOTALS

Dollars Awarded in 1991	
Milwaukee Jewish Education	250,000 [1]
Alzheimer's Disease and Related Dementia	100,000 [1]
Jewish Philanthropy	50,000 [1]
	400,000
Dollars Awarded in 1992	
Families and Children at Risk	1,499,231
Alzheimer's Disease and Related Dementia	1,800,000 [2]
Milwaukee Jewish Education	475,000 [3]
Jewish Philanthropy	865,000 [4]
Special Interest	208,375
Legacy	64,750
	4,912,356
Dollars Committed in 1992, to be Allocated in 1993	
Families and Children at Risk	460,000
Alzheimer's Disease and Related Dementia	100,000 [1]
Milwaukee Jewish Education	271,000 [3]
Jewish Philanthropy	50,000 [1]
Special Interest	175,000
	1,056,000
Dollars Committed in 1992, to be Allocated in 1994	
Families and Children at Risk	325,000
Alzheimer's Disease and Related Dementia	100,000 [1]
Special Interest	40,000
	465,000
Dollars Committed in 1992, to be Allocated 1995 - 2001	
Alzheimer's Disease and Related Dementia ($100,000 annually for 6 years)	600,000 [1]
	600,000

Total Dollars Committed	
Families and Children at Risk	284,231
Alzheimer's Disease and Related Dementia	2,700,000 [5]
Milwaukee Jewish Education	996,000 [6]
Jewish Philanthropy	965,000 [7]
Special Interest	423,375
Legacy	64,750
	7,433,356 [8]

1992 GRANT COMMITMENTS



1992 Fiscal Year Grants

Number of Grants	81
Average Grant Size	$48,559.95
Range of Grants	$250 to $600,000

Figures do not include grants from the Helen Bader Charitable Trusts.

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[1] Total amount from the Helen Bader Charitable Trusts.

[2] Includes $1,700,000 from the Helen Bader Charitable Trusts.

[3] Includes $250,000 from the Helen Bader Charitable Trusts

[4] Includes $50,000 from the Helen Bader Charitable Trusts.

[5] Includes $2,600,000 from the Helen Bader Charitable Trusts.

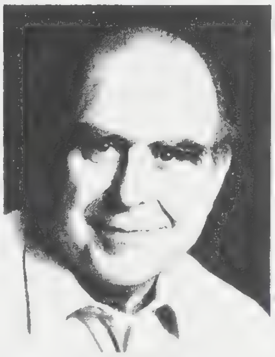
[6] Includes $750,000 from the Helen Bader Charitable Trusts.

[7] Includes $150,000 from the Helen Bader Charitable Trusts.

[8] Includes $3,500,000 from the Helen Bader Charitable Trusts.

Note: The Helen Bader Charitable Trusts were established prior to the incorporation of the Helen Bader Foundation, Inc. for the purpose of awarding preliminary grants of particular interest to the Bader family. The Helen Bader Charitable Trusts no longer accept grant requests

A Letter To Chemists



Alfred Bader

Many of my chemist friends around the world have contacted me to inquire why I am no longer with Sigma-Aldrich. It is difficult to respond to each of you individually and so I have chosen this means of replying.

Some of you know me as the man who founded Aldrich over 40 years ago and built it into your favorite supplier of research chemicals. Many of you know me as the chemist collector who finds paintings for Aldrich's catalog and Aldrichimica Acta covers. Some of you know of the ABC's of my life—art, Bible and chemistry and the Alfred Bader Chemical Collection of research samples from some of the world's greatest chemists. Many of you know me as the chemist who has visited your laboratory with Isabel, his wife, and asked: "What can we do better?"—and surely you know that we meant it. For years we have been an important link between research and Sigma-Aldrich, and many of your suggestions have led to new products for Aldrich and Sigma.

On November 20 of last year, my successor at Sigma-Aldrich as CEO, Dr. Tom Cori, and Dr. David Harvey, the Chief Operating Officer, flew to London specially, to demand that I resign as a director of the Company because, in their words, I had 'bet against the Company.' That 'bet' consisted of a sale of an option on 10,000 shares of Sigma-Aldrich stock. Dr. Cori said that all the directors, except myself and Marvin Klitsner, who was undergoing heart bypass surgery at the time, had held a long telephone discussion about that sale, and had decided that I was no longer fit to work for the Company. I was flabbergasted, refused to resign and attempted to point out how erroneous that interpretation was.

The events leading to this November 20th meeting are simple. In the summer of 1991, I heard about option sales as a conservative way of marketing a limited number of shares at a price somewhat above the current market. I have never personally sold any stock in Sigma-Aldrich but have given a great deal of it away to universities around the world, to the ACS, and to many other institutions.

For some months I had intended to make a gift to my alma mater, Queen's University. With the intention of maximizing the gift, I sold a call option covered by 10,000 shares of my Sigma-Aldrich stock. This option, which sold on August 15 for $2⅝ per share, gave the buyer the right until mid-January to purchase these shares for $45 per share. The University's practice—like almost every institution's—was to sell stock immediately on receipt, and the market was then about $41 per share. So instead, I turned over to Queen's the optioned shares and the option proceeds.

Interestingly, Dr. Cori sold 10,000 shares in August, Dr. Harvey, 7000, and Mr. Gleich, the Company's secretary and treasurer, 5000 shares, all at $41⅛. The option which I sold was taken up in January at $45, making the total proceeds $47⅝ per share, so that Queen's University received some $60,000 more than Dr. Cori for the same number of shares. My *gift* represented less than one third of 1% of my 3,600,000 shares. Dr. Cori's *sale* of about 10% of his stock was a personal sale. As the only major individual stockholder who has *never* sold any of his stock, I have been 'betting *with* the Company' with the biggest part of my assets. To accuse me of 'betting against the Company' is rubbish.

After the November board meeting in St. Louis just eight days before Dr. Cori's meeting with me in London, Dr. Cori and I had agreed that I should continue to work as chairman emeritus, without compensation, doing what I love doing—helping chemists and helping Sigma-Aldrich grow as a world leader in providing research chemicals. At that time Dr. Cori said forcefully, "Keep working, Alfred. I have known many people who have retired and were dead six months later." Then in the November 20th meeting in London, he said that a man who had 'bet against the Company' could not continue in any capacity.

Between then and the next board meeting in St. Louis in February, when the new slate of directors was approved for the annual meeting of stockholders in May, I tried to explain to Dr. Cori and the directors that I had not 'bet against the Company.' I gave a short presentation to the nominating committee stating that I would love nothing more than to continue working for the Company, not primarily for my sake but in the best interests of chemists and Sigma-Aldrich. Minutes later, the committee presented to the board a previously prepared resolution in which Marvin Klitsner and I were excluded from the slate of directors. Marvin and I cast the only dissenting votes.

Ever since November 20th, I have wondered why Dr. Cori decided that I must stop working for the Company, even though I had agreed to work without compensation. This is at his discretion. Many of you have heard my lecture "The Challenges at Sigma-Aldrich," which outlines the history and aims of the Company, and know how supportive I have been of our management; so Dr. Cori's decision seems absurd and I believe we will all be the losers. For many decisions there are *stated* reasons and *real* reasons. The stated reason is that I had 'bet against the Company.' Did he have other reasons? Only he knows and he has not told me.

I will miss my visits with many of you and the excitement in your work which you have shared with me. I would be happy to continue to respond on a personal basis to any calls for help and advice you may care to make; my fax number at home is 414 962 8322.

Above all, Isabel and I want to thank you for the many wonderful experiences we have had with so many of you. Our lives have been so much richer because of you, and we hope that chemistry world wide has been better because of our work.

Sincerely yours,

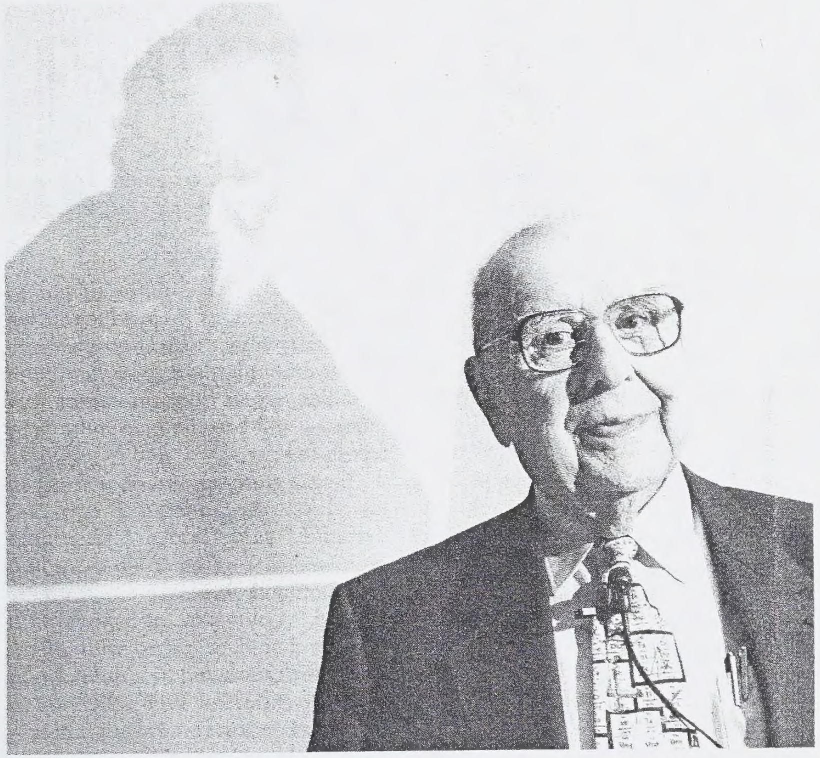
Alfred Bader

Alfred Bader
~~P.O. Box 03225~~
Milwaukee, Wisconsin USA ~~53203~~

April 1992

News

Collector delights audience with fine art tales



Dr. Alfred Bader, author, chemist, art historian, philanthropist, lectured at the University of Toronto at Mississauga (UTM) in the Kaneff auditorium Thursday about his adventures while collecting paintings. Some of his collection, works of art mainly by Dutch masters, have been donated to Queens University with a couple recently donated to UTM.

Alfred Bader isn't one to be fooled by appearances.

Which is why he owns some of the most beautiful paintings in the history of the world.

"I love going to little auctions and looking at dirty old paintings," Bader told about 100 people Thursday in the second in the Canadian Perspectives annual lecture series at the University of Toronto at Mississauga.

Small wonder why, when your knowledge and acumen can land you works of art which other supposed experts have discarded as phonies and fakes.

Bader explained how he bought a Rembrandt at auction which had been attributed to an imitator of the same period, whose initials were prominently displayed on the work. Trusting his own instincts, he bought it nonetheless.

The founder of Aldrich Chemicals (now Sigma-Aldrich which has offices in Mississauga) knew that for a period of time at the end of the 18th century, the imitator's work was more valued than Rembrandt's. A little solvent soon removed the overpainted initials and experts confirmed the painting was by the master.

He recognized the style of Rembrandt contemporary Jan Lievens, one of his favourite painters, in a luscious landscape called Trees that he spotted in a sale. Unfazed by "expert" opinions that it wasn't Lievens' work, Bader bought the painting, and soon uncovered the artist's signature beneath the wooden frame.

Bader knows what he likes and he buys what he likes. It doesn't matter if it's a charming portrait of squirrels painted by an unknown of the period of the Dutch masters, or by someone famous.

The squirrel portrait may be incongruous, but it hangs right along much more famous pictures in his Milwaukee home.

The 79-year-old gave an hour-long slide presentation filled with stories that were as stunning as the art he lovingly exhibited.

Some of his most prized pieces are works by 17th Century Dutch masters that are not yet attributed. "It is such fun to buy pictures just for their beauty," he exulted. The element of "mystery" in the eventual discovery of the identity of the painter just adds another tantalizing twist.

All but two of the 250 or so master works he has collected over 50 years are housed already, or will be housed, at Queen's University.

It is his way of repaying a kindness that changed his life.

After coming to Canada and getting a high school education, Bader tried to get into university. He was

rejected by McGill because its quota of Jews was filled. A kindly registrar at Queen's accepted the young man whose subsequent brilliant academic career eventually led to a Ph.D. from Harvard.

Bader, who ran out of copies of his book to sell at UTM, thoroughly enjoyed his latest return to Mississauga.

As audience members thanked him for his tales of collecting, he said with genuine conviction, "believe me, I've enjoyed it most of all."

THE GLOBE AND MAIL
WEDNESDAY, OCTOBER 26, 2005 G

Former PoW gives to his alma mater, Queen's, in spades

BY OMAR EL AKKAD

In 1941, after more than a year in a Montreal prisoner-of-war camp, Alfred Bader tried to go to university. The 17-year-old had already passed his junior and senior matriculation exams, earning exceptional grades.

But when he applied to study at McGill University, the response was blunt and final: The school's Jewish quota is full, apply next year.

Over the next half-century, the decision to turn Mr. Bader away would cost McGill about $50-million. That's how much the chemical company founder and art collector has donated to the school that did accept him, Queen's University.

Mr. Bader earned his chemistry PhD at Harvard after studying at Queen's, and went on to amass a multimillion-dollar fortune as the head of a global chemical business.

He offered his Canadian alma mater another helping hand this week. Mr. Bader will put up the money to build a waterfront arts centre at the Kingston school.

Mr. Bader's gift is the latest in a series of donations he has made to Queen's, in part to give back to the institution he credits for changing his negative perception of Canada.

"It was just absolutely terrible," he said in an interview yesterday, speaking of his first year in Canada after he arrived in 1940. "I thought Canadians were dishonest."

It was hard for the Vienna-born Jew to find evidence to the contrary, as he and the other 270 camp residents watched soldiers cut open their luggage upon arrival. He still remembers an immigration officer telling him one Jew in Canada is one Jew too many.

At Queen's, he saw Canada in a different light. "I learned that most Canadians are honest, and that Christians are capable of being good people," he said. "In Vienna, all I saw of Christianity was hypocrisy."

Today, it's impossible for a student to earn a degree at Queen's without coming across something donated by the Bader family.

JOHN MORSTAD/THE GLOBE AND MAIL

Alfred Bader, shown in this 1999 photo, went to Queen's University after McGill rejected him because its Jewish quota was full.

A $10-million Rembrandt painting hanging in the University's art gallery is a gift from Mr. Bader. The residence at the school's international study centre — Herstmonceux Castle in East Sussex, England — is also named after the Baders, who bought the castle and donated it to Queen's in the early 1990s.

"He has given so many gifts to Queen's," school principal Karen Hitchcock said. "He brought something very special to the university: his own experiences. Sometimes that gets lost because he donated a castle or he donated a Rembrandt."