



FAX FROM



DR. ALFRED BADER

Suite 622 924 East Juneau Avenue Milwaukee, Wisconsin 53202 Telephone: 414/277-0730 Fax: 414/277-0709

May 21, 1996

TO: Ms. Cath O'Driscoll Features Editor, *Chemistry in Britain*

FAX: 44-171-494-1134

Dear Ms. O'Driscoll:

I have just received the May issue of *CiB* and page 81 answers my last question in my letter of May 8th.

Could you please thank your associates most sincerely for this great effort?

Isabel and I will be arriving at Gatwick next Sunday and won't return home until July 26th.

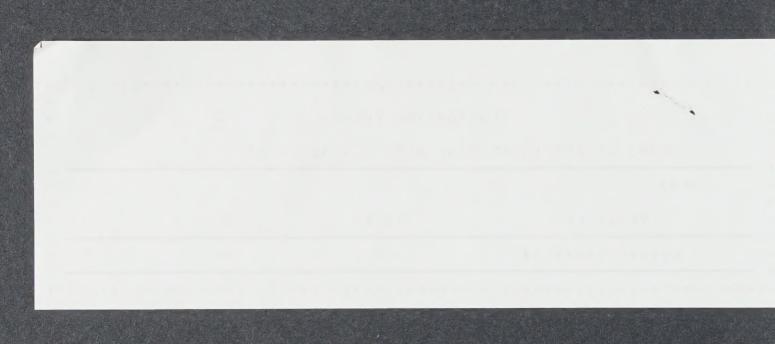
Do you know yet whether you would like to publish my paper on Anschütz, Couper and Loschmidt, and if so, should I take photographs with me to give you next week?

With many thanks for all your help, I remain,

-d AB/cw



RECEIVER	PAGES	NOTE	
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FAX FROM

DR. ALFRED R. BADER White Gables 2A Holmesdale Road Bexhill-on-Sea East Sussex TN39 3QE

Telephone/Fax: 0424-22-22-23

A Chemist Helping Chemists

0142422222

Date: 1) eccurber 10 1995 Mr. Barry Anderpor Page 1 of ____ To: Fax: 01223 423420 Near Mr. Ander pour : I am so happy that you will be selling my antebiography. Book reviews appeared in Chemistry in Britain, July 1995 P.55-Financial Times, June 30 1995, B. 13 Chemistry & Industry, November & 1995, p. 888 Chem. & Eng. News, Necember 4 1995, p.41 Reviews of my life appeared Chemistry in Britain, Nodember 1993, P. 919 Chem. E Eng. Denos, May 9 1994, P. AI NJ wife and I will be in Cambridge Ris Tursday and wednesday, Jecember 12-13, to disit and many fiends in the clausstry Department. We would be happy to disit you, if you need further in formation. Bert regards apria Baan





A Chemist Helping Chemists

May 8, 1996

Ms. Cath O'Driscoll Features Editor Chemistry in Britain Burlington House, Piccadilly London W1V 0BN England

Dear Ms. O'Driscoll:

It has been over 5 months since you wrote to me so kindly on December 4, 1995 and to refresh your memory, I enclose a copy of your letter and your valuable suggestions for a CiB feature article. Please don't mind the delay, but I have been traveling a good deal.

The Plenum work on Loschmidt is not likely to appear in print until late this year, because several of the authors delayed submissions and much of the English had to be polished. I am sure that you are familiar with such difficulties.

Will the enclosed, much shortened article be suitable for *CiB*? You will note that I have incorporated all of your suggestions, but the paper may still be too long and cumbersome for you. If so, please just let me know, and I will certainly understand.

Incidentally, chapter 16 in my autobiography discusses Anschütz, Couper and Loschmidt, but I thought that referring to that chapter would be too self-serving. Rather, I have referred readers to the two articles in *CiB*, reference 26 in the enclosed paper.

You will, of course, wish to improve the title - perhaps to include "... the chemist turned detective".

There is no need to reply in detail because I plan to be in London during the week of May 27th and plan to visit with you then to discuss this personally.



Ms. Cath O'Driscoll May 8, 1996 Page 2

I do have one - and only one - good silver print of the enlarged Loschmidt stamp, of which I enclose a Xerox copy. If you accept the paper for publication, then I will, of course, gladly loan you that silver print. I can also loan you good photographs of Couper and Loschmidt.

The first-day postmark showed Loschmidt's structure for acetic acid, and if you wish, that cover could become Fig. 2.

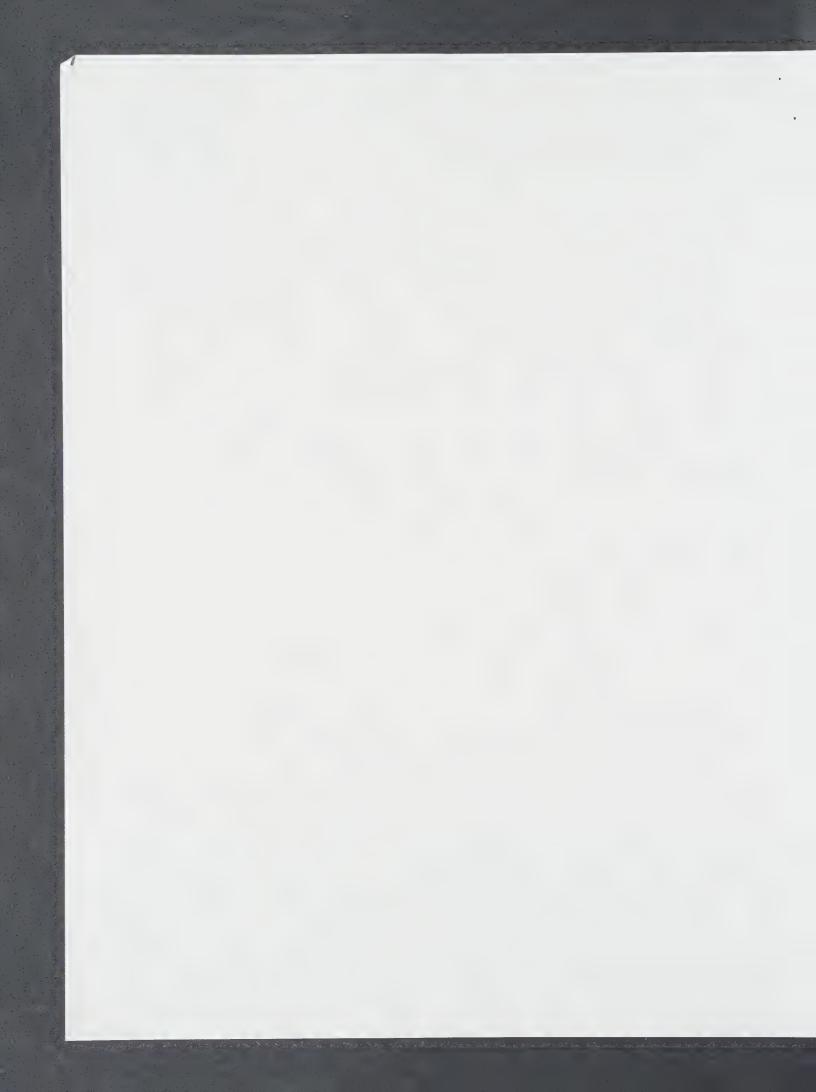
May I ask you a question in a totally unrelated matter? *CiB* published a very complimentary book review written by John Emsley on page 557 of the July 1995 issue. Last December, your Cambridge office decided to order 20 copies of the book to be offered by the Royal Society of Chemistry. Does *CiB* have any plans to make the availability of that book through the Royal Society of Chemistry known to chemists? I am asking because a good many chemists around the world have inquired where they can purchase the book. The answer to American chemists is easy, because the ACS is offering it and has had it available at the bookstands of the last two national ACS meetings. Can I say to British chemists that the book is available from the RSC?

With best regards to you and Richard Stevenson, I remain,

Yours sincerely,

AB/cw

Enclosures



Chemistry IN BRITAIN

> The Royal Society of Chemistry, Burlington House, Piccadilly London W1V 0BN. Tel: 0171-437 8656. Fax: 0171-494 1134

Dr Alfred R. Bader 52 Wickham Avenue Bexhill-on-Sea East Sussex TN39 3ER

4/12/95

Dear Dr Bader,

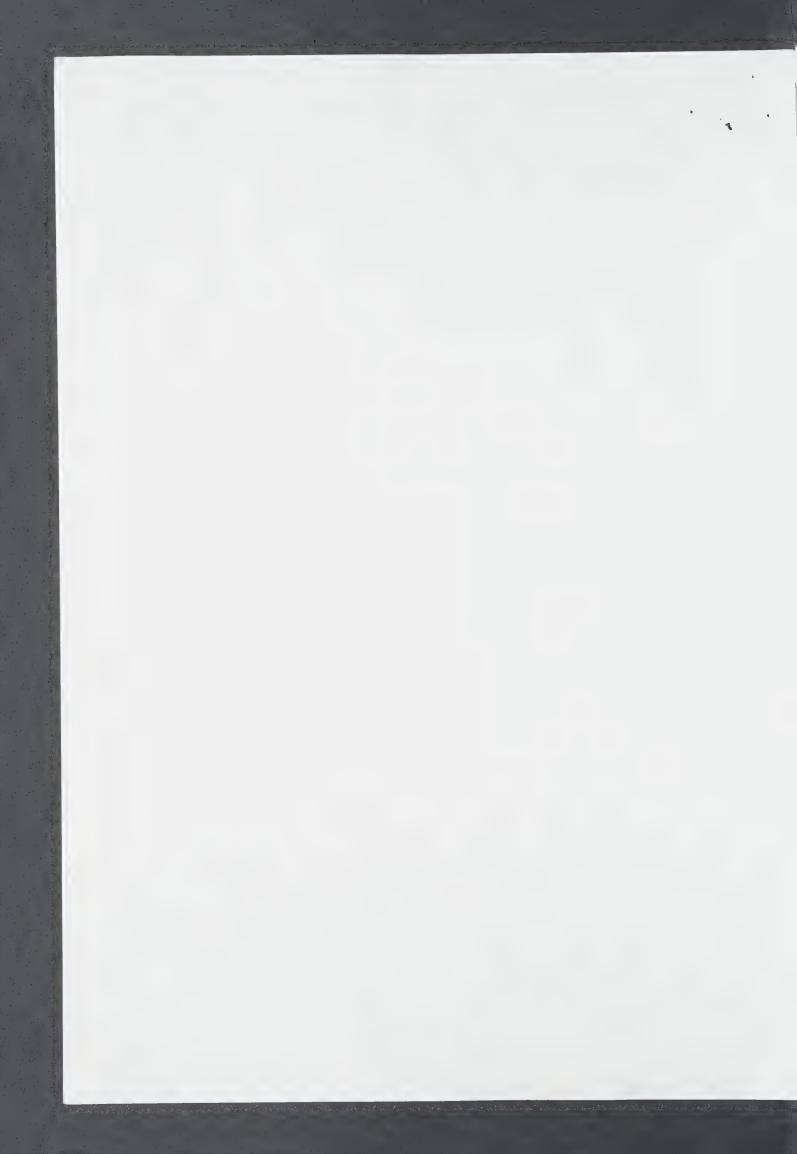
As promised, I have now read your book chapter on the work of Richard Anschütz. This makes interesting reading, and is a useful starting point for the *CiB* feature. I particularly liked the fact that the article highlights the role of science historians as well as bringing out the injustice done to Couper. The quote by Winston Churchill at the end of the current chapter might make a nice introduction to the *CiB* feature article?

It would also be useful to mention your previous article on Loschmidt - and Anschutz' involvement in this - quite early on, by way of background. I appreciate that you may want to revise the present chapter quite significantly for our readership, but nevertheless you might find it helpful to note some of my queries on the following page. I hope that you find these comments useful and look forward to seeing the article next June as we discussed,

With best wishes,

Cath O'Discoll

Cath O'Driscoll Features editor



Minor queries on current chapter

1. In what year did Anschutz first come across the work of Couper?

2. What is the significance of the salicyclic acid-PCl₅ reaction? A scheme might be helpful, or a structure for the resulting compound

3. Some qualification of who Dumas and Wurtz (first name?) are would be helpful

4. It would be better to spell out what Kekulé's criticisms of Couper's claims were directly when first mentioned (near the bottom of page 2)

5. Is anything further known about Couper: the reasons for his madness and when he . discontinued his chemical researches? Did he produce any other work of particular note?





A Chemist Helping Chemists

May 10, 1996

Ms. Cath O'Driscoll Features Editor *Chemistry in Britain* Burlington House, Piccadilly London W1V 0BN England

Dear Ms. O'Driscoll:

It has been over 5 months since you wrote to me so kindly on December 4, 1995 and to refresh your memory, I enclose a copy of your letter and your valid suggestions for a CiB feature article. Please don't mind the delay, but I have been traveling a good deal.

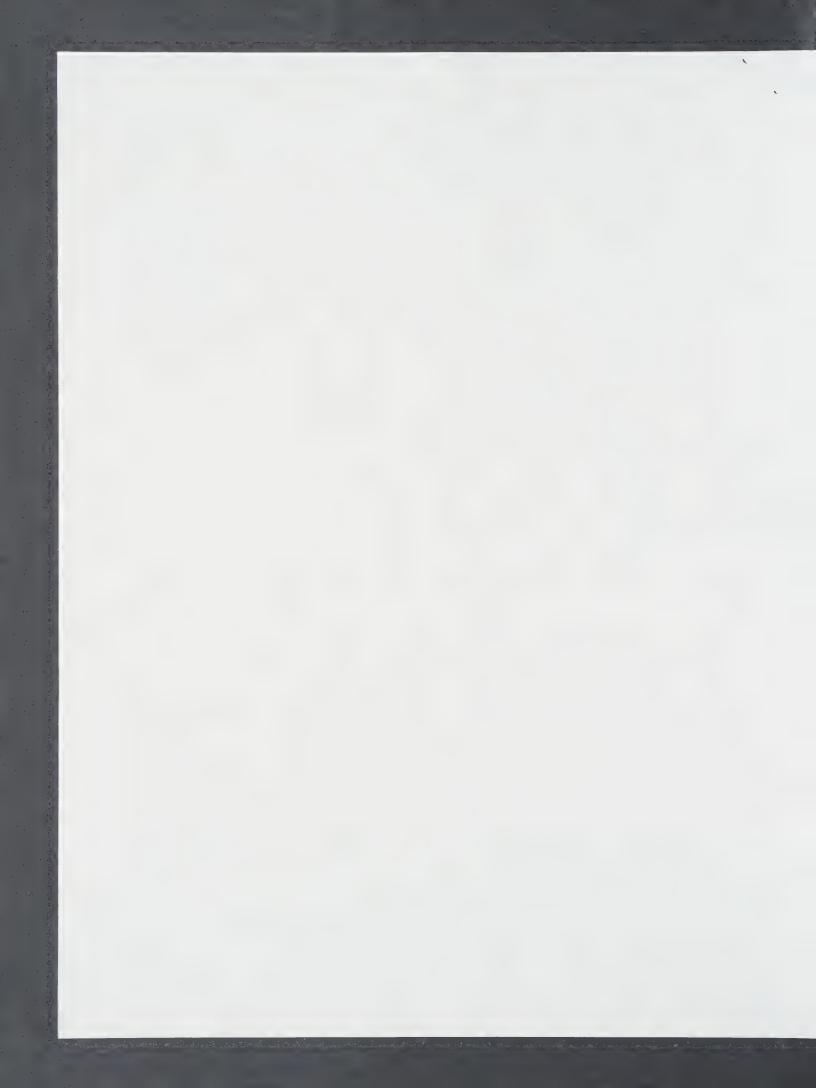
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Ms. Cath O'Driscoll May 10, 1996 Page 2

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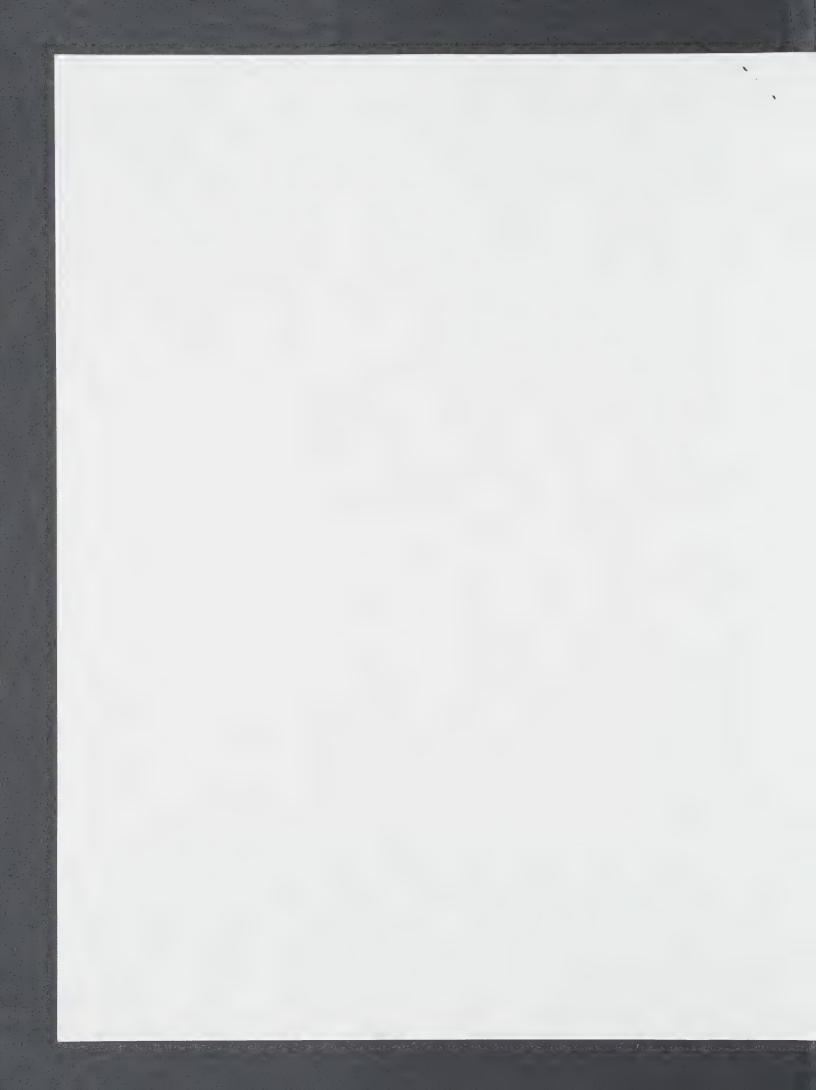
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With best regards to you and Richard Stevenson, I remain,

Yours sincerely,

AB/cw

Enclosures





A Chemist Helping Chemists

August 15, 1996

Mr. Richard Stevenson Editor, *Chemistry in Britain* Royal Society of Chemistry Burlington House, Piccadilly London W1V 0BN England

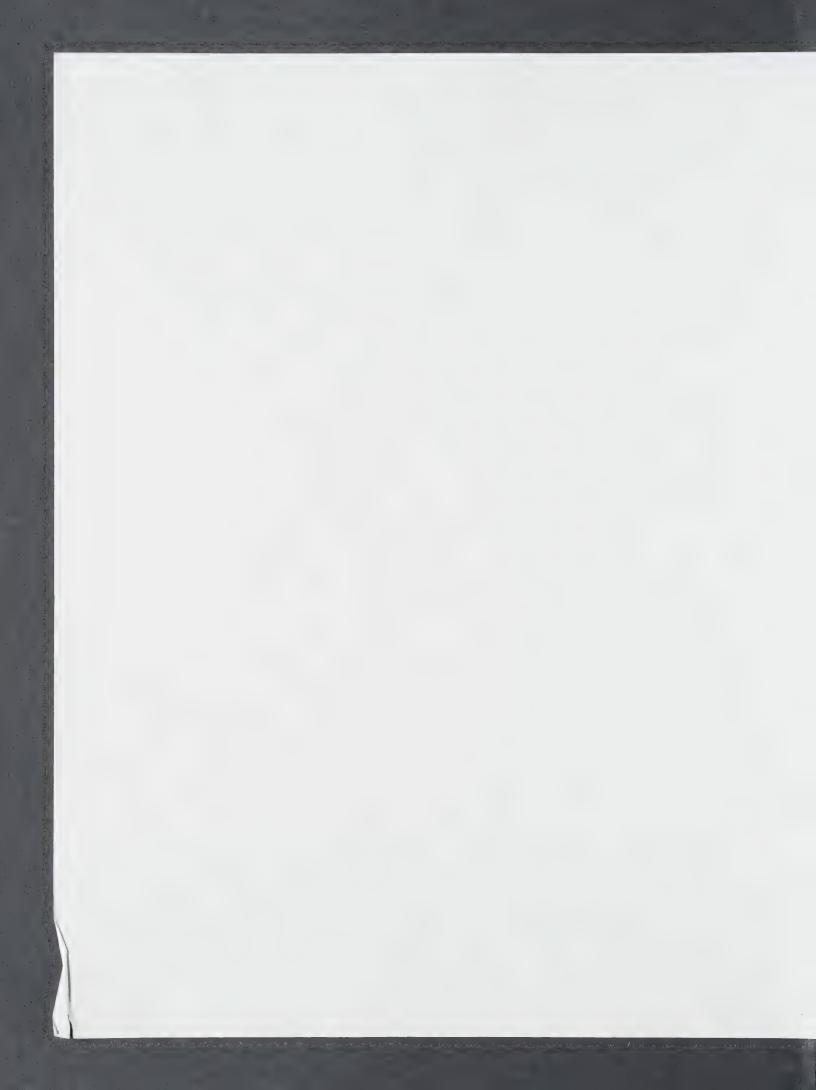
Dear Richard:

As you will be able to imagine, I read *Chemistry in Britain* from cover to cover, usually with great pleasure. But for years, I have had to have my magnifying glass close to me to be able to see the index to advertisers on your inside back cover. Now, for the first time, I do not need my magnifying glass. Many thanks.

I must tell you that I am really concerned by Professor Bianchi's letter on page 22 pointing out that a mixture of just 1 milliliter of cyclooctatetraene with 1 milliliter of dimethyl acetylenedicarboxylate led to an explosion that shook a three-story building. Of course, the mixture had to be heated to 140° C., but terrorists might be able to heat such a mixture of two more-or-less available liquids under pressure with disastrous results. Let's hope that not too many terrorists read *Chemistry in Britain*.

With best wishes, as always,

AB/cw



KOYAL SOCY CHEMISTRY

to 3364

qv Chemistry IN BRITAIN

The Royal Society of Chemistry, Burlington House, Piccadilly London W1V 0BN. Tel: 0171-440 3364. Fax: 0171-494 1134 e-mail: leem@chemcouk.dircon.co.uk

Fax Message

andor "

To: Dr Alfred Bader

From: Cath O'Driscoll

No of pages including cover: 1

Date: 22/5/96

Fax: 0171 4941134

Dear Dr Bader,

Thanks for your fax yesterday. I have passed your thanks about the book advert on to Barry Anderson in our publishing department. As regards your article, this reads well and I am keen to publish it. My one conern is with the number of references. Our policy is to allow a maximum of 20 references, or preferably to encourage authors to provide a selected further reading list in lieu of references.

In this case I appreciate that some of the references are necessary to attribute the quotes, but perhaps you might care to suggest others that may be cut? The article is fairly short by *CiB* standards and so many references may look a bit disproportionate by comparison.

It would certainly be helpful if you could bring along a selection of photographs with you next week so that we can decide on the accompanying illustrations. Perhaps you could let me know when you have a better idea of what day you might be coming in next week so that I can arrange to find some space (my own area is surrounded by papers!). I look forward to discussing these ideas with you at that time,

With best wishes,

Cath O'Driscoll





A Chemist Helping Chemists

July 31, 1996

Ms. Catherine Martin Editorial Assistant Chemistry in Britain Royal Society of Chemistry Burlington House, Piccadilly London W1V 0BN England

Dear Ms. Martin:

In response to your fax of July 29th, enclosed please find the signed statement.

I so enjoy submitting articles to *Chemistry in Britain* that I was happy that you have not paid me for my last article and hope that you will not for this one. Hence, I have deleted "in consideration of the fees from time to time paid by the Society".

As I am an Honorary Fellow, I receive *Chemistry in Britain* here, but would appreciate the 15 copies being sent to my English address. Also, I would consider it a favor if you would make a Xerox copy of my article as soon as it has appeared and send it to me by air mail. That way I would see it several weeks before I receive the one copy here in Milwaukee.

Please give my best regards and many thanks to Ms. O'Driscoll and Ms. Hook.

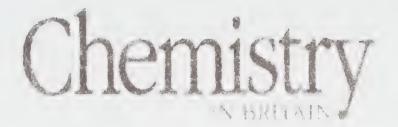
With best personal regards, I remain,

Yours sincerely,

AB/cw



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Fax Message

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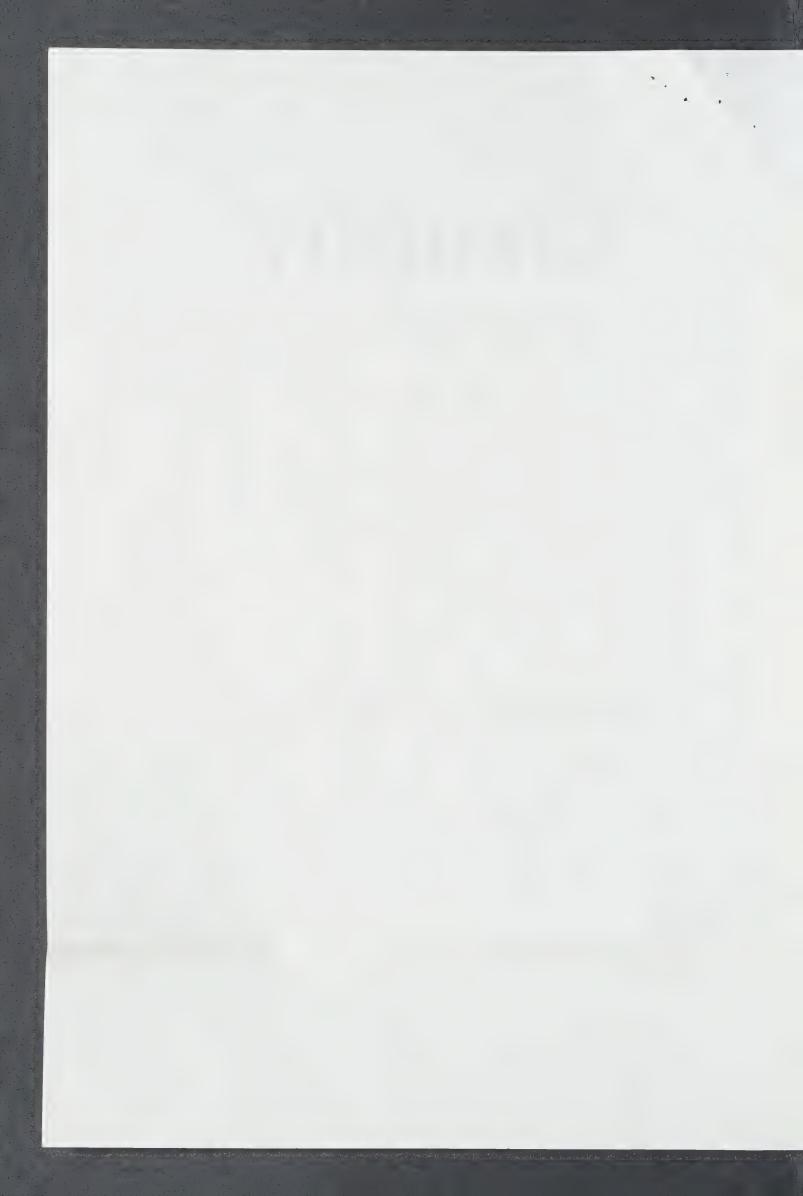
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Please could you complete the attached order form for extra copies of the magazine containing your article and also sign the copyright declaration and return both forms to me as soon as possible

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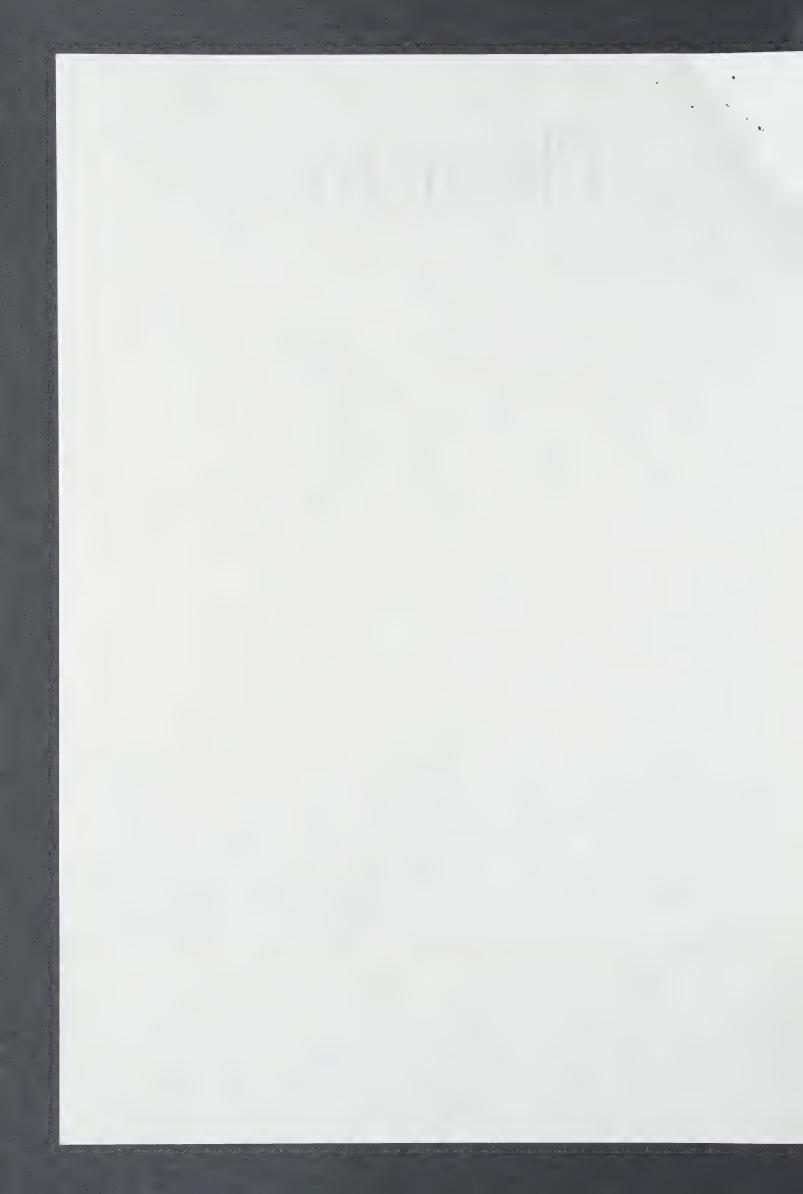
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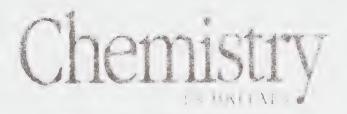
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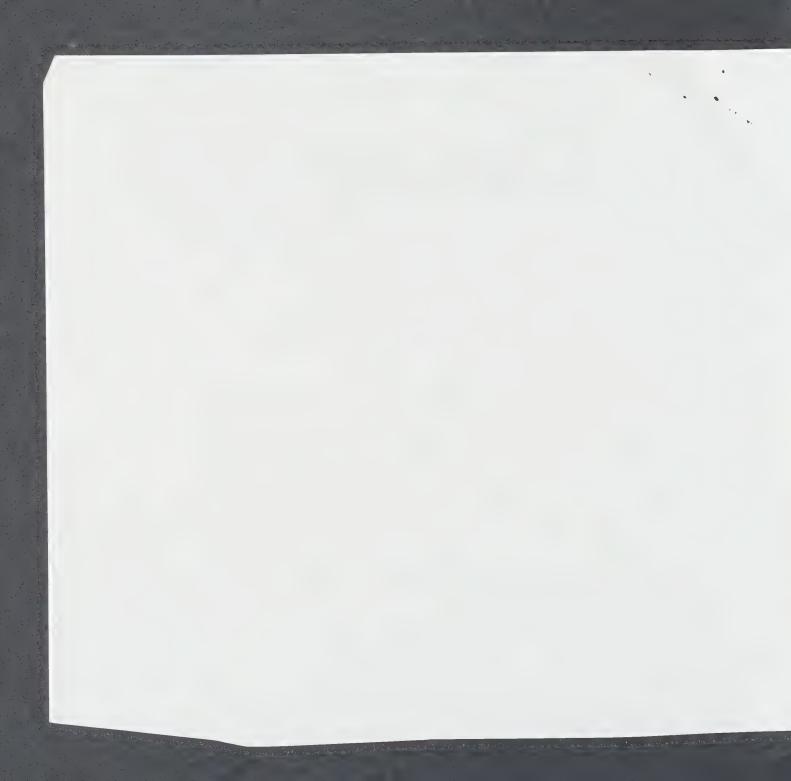


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FAX FROM

DR. ALFRED BADER Suite 622 924 East Juneau Avenue Milwaukee, Wisconsin 53202 Telephone: 414/277-0730 Fax: 414/277-0709

May 22, 1996

TO: Ms. Cath O'Driscoll Features Editor, *Chemistry in Britain*

FAX: 44-171-494-1134

Dear Ms. O'Driscoll:

Thank you so much for your fax of today.

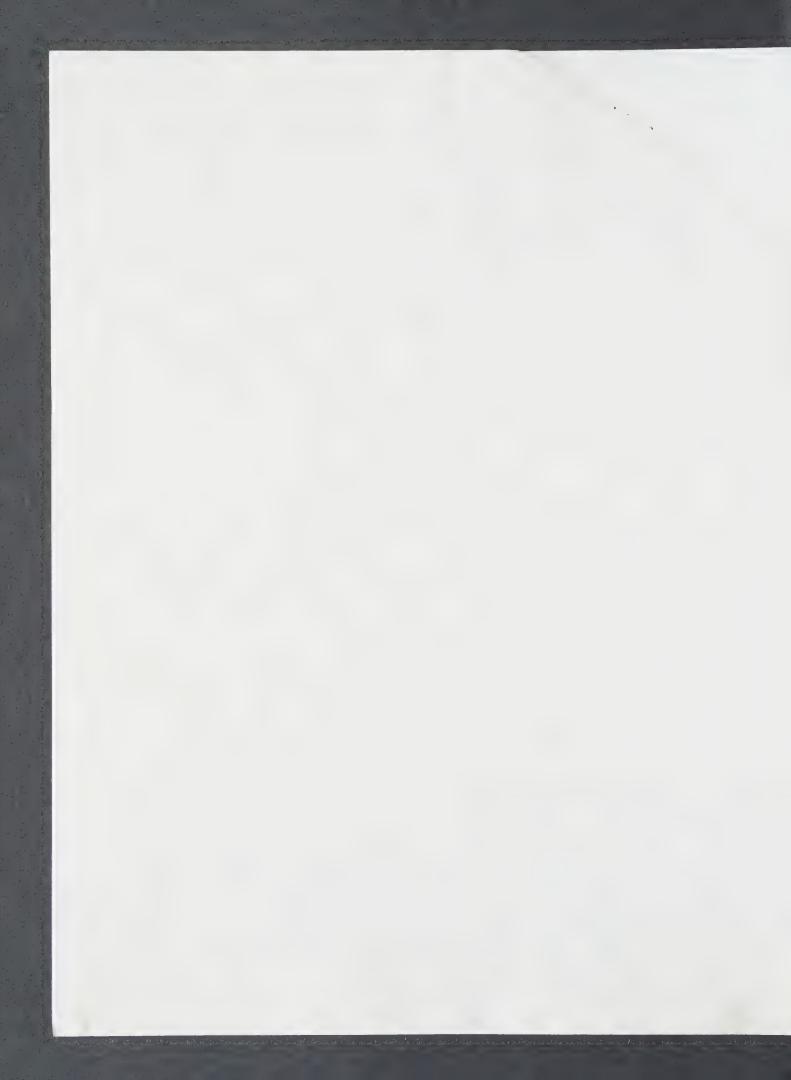
I plan to be in London this coming Tuesday and Wednesday, May 28th and 29th, and I could visit you on either of those days. But if you could see my desk, you wouldn't feel that you have to rearrange yours.

Of course, I will bring some photographs with me.

Somehow we should be able to work together to reduce the number of references from 26 to 20 or less.

With best wishes, I remain,

P.S. A quick glance at the MS puggets that references Nos. 6, 8, 11, 13, 21 and 27 AB/cw sould be deleted



22 MAY 196 11:40 FROM ROYAL SOCY CHEMISTRY

40 3364

Chemistry

The Royal Society of Chemistry, Burlington House, Piccadilly London W1V 0BN Tel: 01/1-440 3364 Fax: 0171 494 1134 e-mail: leem@chemcouk.dircon.co.uk

Fax Message

Fo: Dr Alfred Bader

From: Cath O'Driscoll

No of pages including cover: 1

Date 22/5/96

1. .

Fax 0171 4941124

Thanks for your fax yesterday. I have passed your thanks about the book advert on to Barry Anderson in our publishing department. As regards your article, this reads well and I am keen to publish it. My one conern is with the number of references. Our policy is to allow a maximum of 20 references, or preferably to encourage authors to provide a selected further reading list in lieu of references.

In this case I appreciate that some of the references are necessary to attribute the quotes, but perhaps you might care to suggest others that may be cut? The article is fairly short by *CIB* standards and so many references may look a bit disproportionate $c_1 = 0000$, $db < c_2$

It would certainly be helpful if you could bring along a selection of photographs with you next week so that we can decide on the accompanying illustrations. Perhaps you could let me know when you have a better idea of what day you might be coming in next week so that I can arrange to find some space. (my own area is surrounded by papers!). I look forward to discussing these ideas with you at that time,

With best wishes

Yours sincerely

Path O'Driscoll



TRANSACTION REPORT

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> The Royal Society of Chemistry, Burlington House, Piccadilly London W1V 0BN. Tel: 0171-437 8656. Fax: 0171-494 1134 E-mail: editorial@chembrit.co.ul

Dr Alfred Bader White Gables 2A Holmesdale Road Bexhill Road Bexhill-on-Sea East Sussex TN39 3QE

17 July 1996

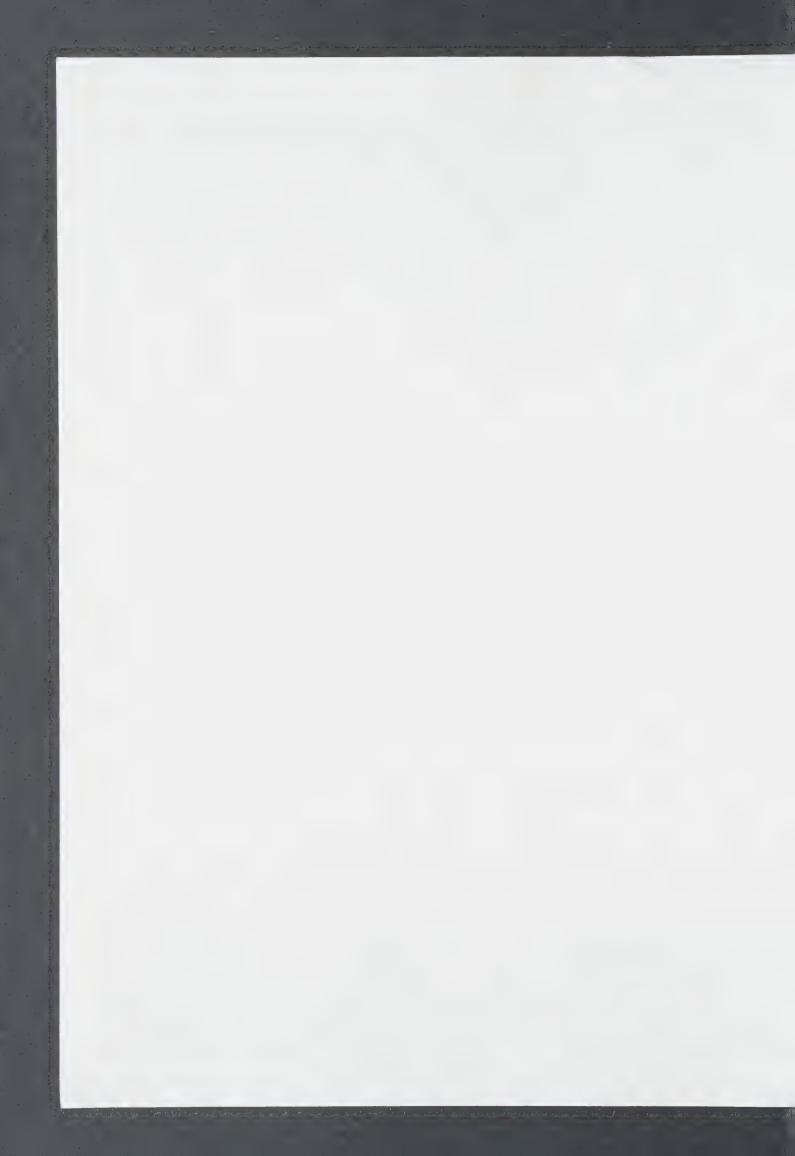
Dear Dr Bader

As you requested, please find the galleys with your changes taken over. In addition, we are now in receipt of the accompanying structures and we would be grateful if you would check these too. If you have any changes please let us know by Friday 19 July.

With many thanks.

Yours sincerely

Victoria Hook Assistant Features Editor



Dr Alfred Bader White Gables 2A Holmesdale Road Bexhill Road Bexhill-on-Sea East Sussex TN39 3QE

9/7/96

Dear Dr Bader,

As requested in your fax yesterday I am now sending the final galleys of your article for checking. I have incorporated all your changes on this, including the two Schiemenz references (number 5). I hope that this now meets with your approval and look forward to hearing from you as soon as this is convenient,

With best wishes,

Yours sincerely,

Cath O'Dascoll

Cath O'Driscoll Features editor



FAX FROM



DR. ALFRED BADER

Suite 622 924 East Juneau Avenue Milwaukee, Wisconsin 53202 Telephone: 414/277-0730 Fax: 414/277-0709

September 20, 1996

TO: Ms. Cath O'Driscoll Features Editor, *Chemistry in Britain*

FAX: 44-171-494-1134

Dear Ms. O'Driscoll:

Thank you for the beautiful presentation of the Anschütz paper in this month's *Chemistry in Britain*.

If past history is any indication, you will receive some angry letters. Could you please fax these to me so that I can reply timely?

With many thanks for your help and best regards, I remain,

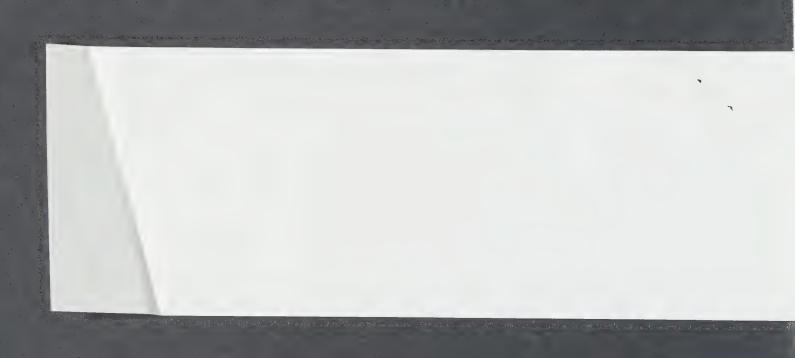
Yours sincerely,

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AB/cw



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> The Royal Society of Chemistry, Burlington House, Piccadilly London W1V 0BN. Tel: 0171-437 8656. Fax: 0171-494 1134 E-mail: editorial@chembrit.co.ul

Dr Alfred Bader 924 East Juneau, Suite 622 Milwaukee Wisconsin 53202 USA

September 4, 1996

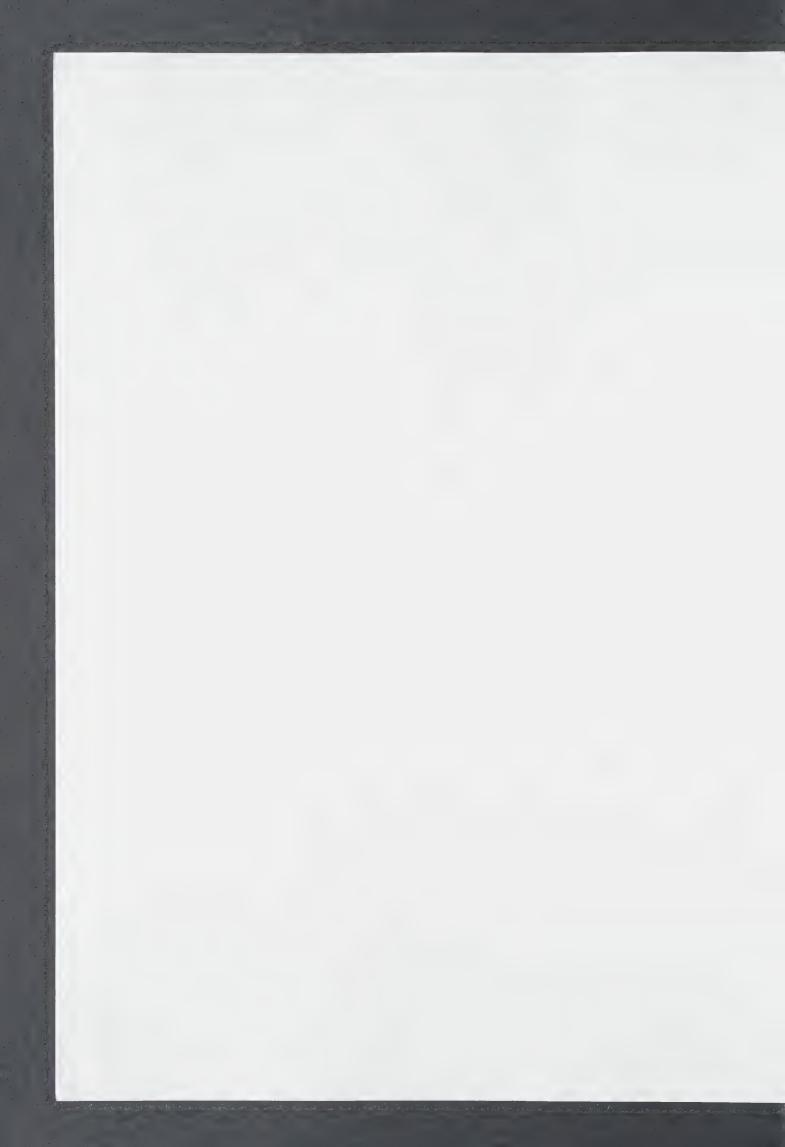
Dear Dr Bader

I have pleasure in sending you a copy of the latest issue of *Chemistry in Britain*, in which your article, *Building on the past*, appears. As you requested, I have sent 15 copies of the magazine to your address here in the UK. I am sure that you will be pleased with the final product.

Cath O'Driscoll has asked me to thank you for your help in ensuring a swift and thorough turnaround at each stage of manuscript preparation, and that she looks forward to working with you again in the future.

Yours sincerely

Catherine Martin Features administration



• 1. BN 10101/1-4378656 Fax:01/1-494

Dr Alfred Bader, 924 East Juneau, Suite 622, Milwaukee, Wisconsin 53202, USA.

22 August 1996

Dear Dr Bader,

Thank you for your kind letter. Indeed, you mentioned your dislike of the advertising index when you visited us a few weeks ago. Afterwards I discovered that my art editor had already been commissioned by the advertisement manager to redesign the page to match more closely the general style of the magazine. I am glad you like the outcome.

The next task will be to upgrade the content and style of the RSC News pages - a very difficult task. Our editorial board members jokingly refer to the section as 'Pravda'. They also think that the quality of some of the paid-for advertisements is now letting down the magazine as a whole!

I agree that letters and news items on safety matters can pose an ethical dilemma for editors. I have always taken the view that our primary concern is for the safety of chemists, and that we should always publish them as a matter of urgency, while accepting that a small number of people could misuse the information. The same applies to information about poisons or illegal drugs. I comfort myself that someone would need further knowledge to make serious misuse of the information we publish, and that anyone with that expertise would also have access to Bretherick, Sax, and books on toxicology.

Yours sincerely

Richard Stevenson, Editor.



FAX TRANSMITTAL SHEET

Dr. Alfred Bader 2961 North Shepard Avenue Milwaukee, Wisconsin 53211 Telephone 414 962 5169 FAX 414 962 8322

October 7, 1993

Le pages.

TO: Mr. Richard Stevenson, Editor Chemistry in Britain FAX 011 44 71 494 1134

Dear Mr. Stevenson:

Thank you for your clear and kind article. Except for my suggestions on pp. 18-19, I believe that all of my proposed changes will be self-explanatory. Here are just a few comments:

<u>Page 2</u> - My paternal great grandfather was a merchant in Moravia. My paternal grandfather was a civil engineer. Hence I have just deleted the word merchant.

Page 8 - Eastman Kodak did not make MNNG, but similar carcinogenic nitrosamines.

Page 11 - The decision to put paintings on covers was a board decision. The vote was 3:2; I voted against it. Of course the majority was right!

Page 13 - My dismissal involved the groundless accusation that I had "bet against the company." This is described in my letter to chemists of April 1992, copy enclosed.

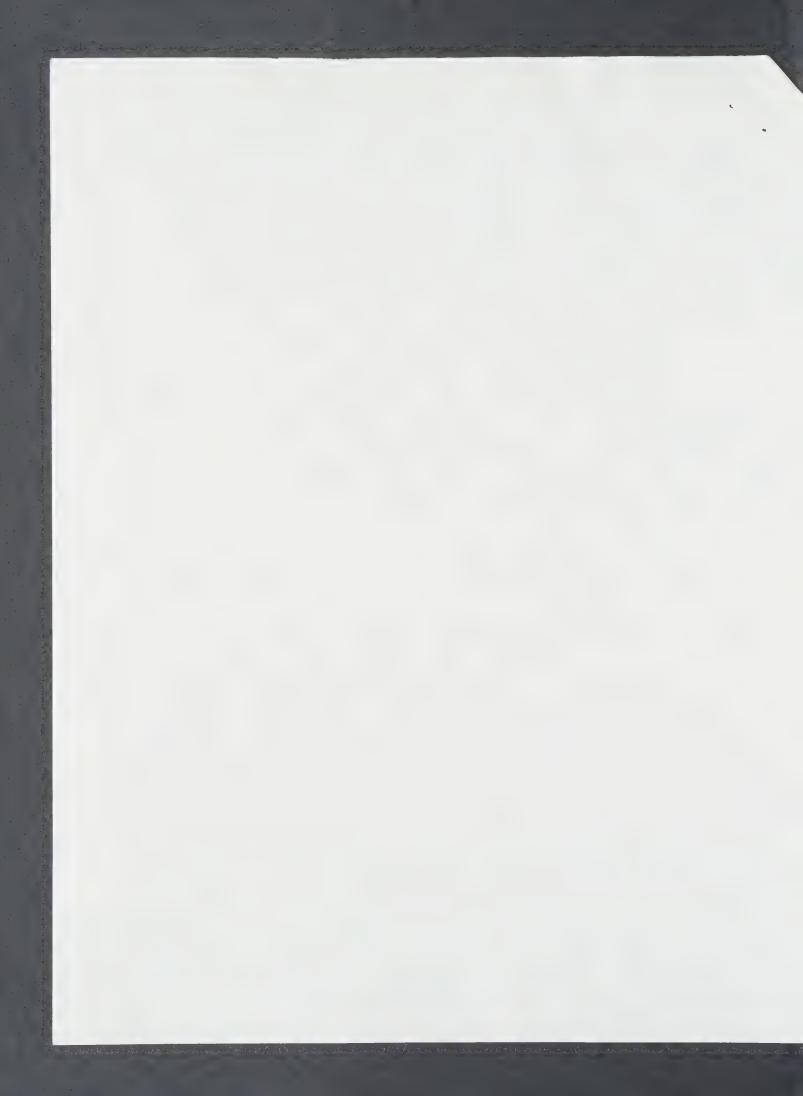
Page 15 - My family has joined me in giving the \$2 million seed money. I hope that you will understand why I would like the sentence about other galleries queuing up deleted.

Page 16 - The Rembrandt hammer price was £3.8 million. With commission and VAT the total was £4,246,500, which cost U.S.\$8.2 million. The profit was shared with Otto Naumann. Hence my suggested text "...still leave him with a reasonable profit" is accurate.

Page 17 - Only one bank, Guinness Mahon was involved.

Page 18 - Isabel is really unhappy about "...and does not look at all like a millionaire's residence" and I hope that you will consent to deleting this statement. Surely we neither act nor live like millionaires--I hope you will understand.

At the time of my negotiation with Savills, Sotheby's was no longer joint real estate agent. Savills and Sotheby's had produced the brochure, but then Sotheby's bowed out.



Mr. Richard Stevenson October 7, 1993 Page Two

The "medieval pageant and summer fayre" was held on July 11, two weeks <u>before</u> the contracts were actually exchanged. Hence technically, it could not celebrate the official handover.

<u>Pages 18, 19</u> - The facts surrounding the Helen Bader and the Isabel and Alfred Bader Foundations are complicated, and are, I think, fairly summarized in my rewrite. Helen, Isabel and my wills are practically identical. In time, our younger son Daniel will, I hope, administer all the foundations. He works very hard, takes no salary himself and knows our interests. I enclose 3 pages from the Helen Bader Foundation report of 1992, summarizing the foundation's work.

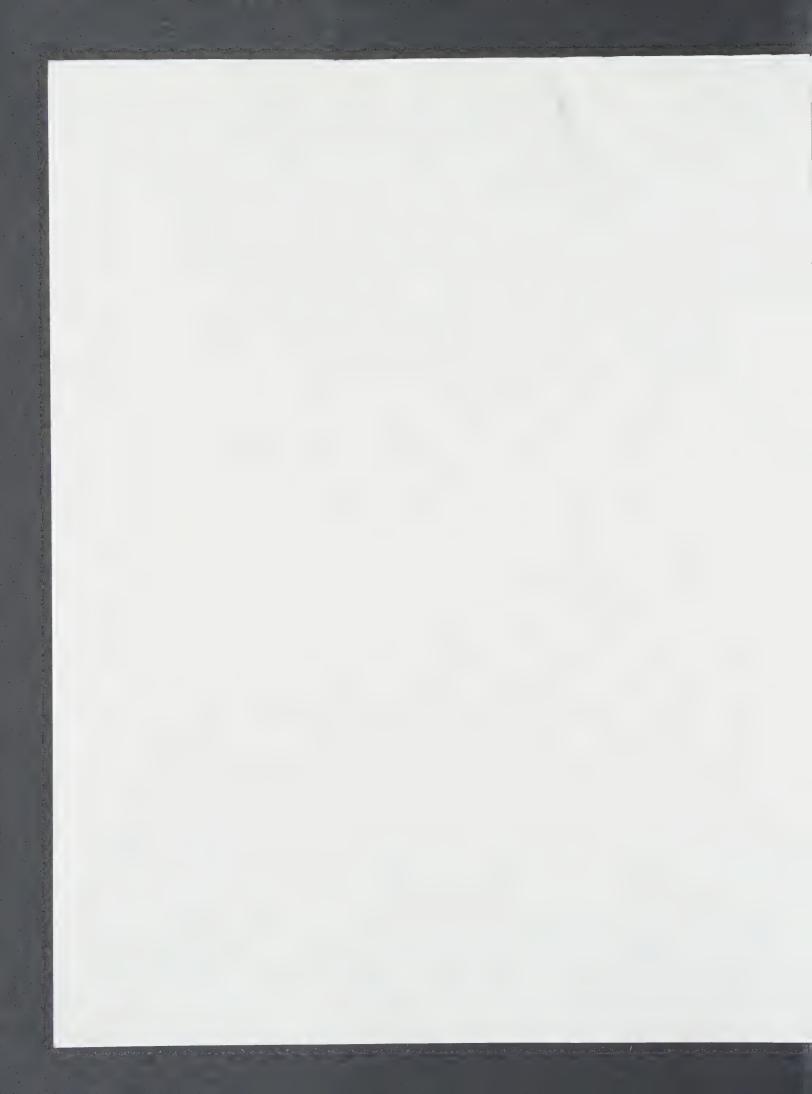
I am amazed at and greatful for the enormous amount of work you did. Many, many thanks. If you have any questions, please fax; we'll be in Milwaukee until Noon of October 12. I look forward to thank you personally in London next month.

May I ask you to confirm by fax that this 25 page fax has arrived legibly.

Best wishes,

Jeg. d Bady

Enclosures



Portrait of a connoisseur chemist

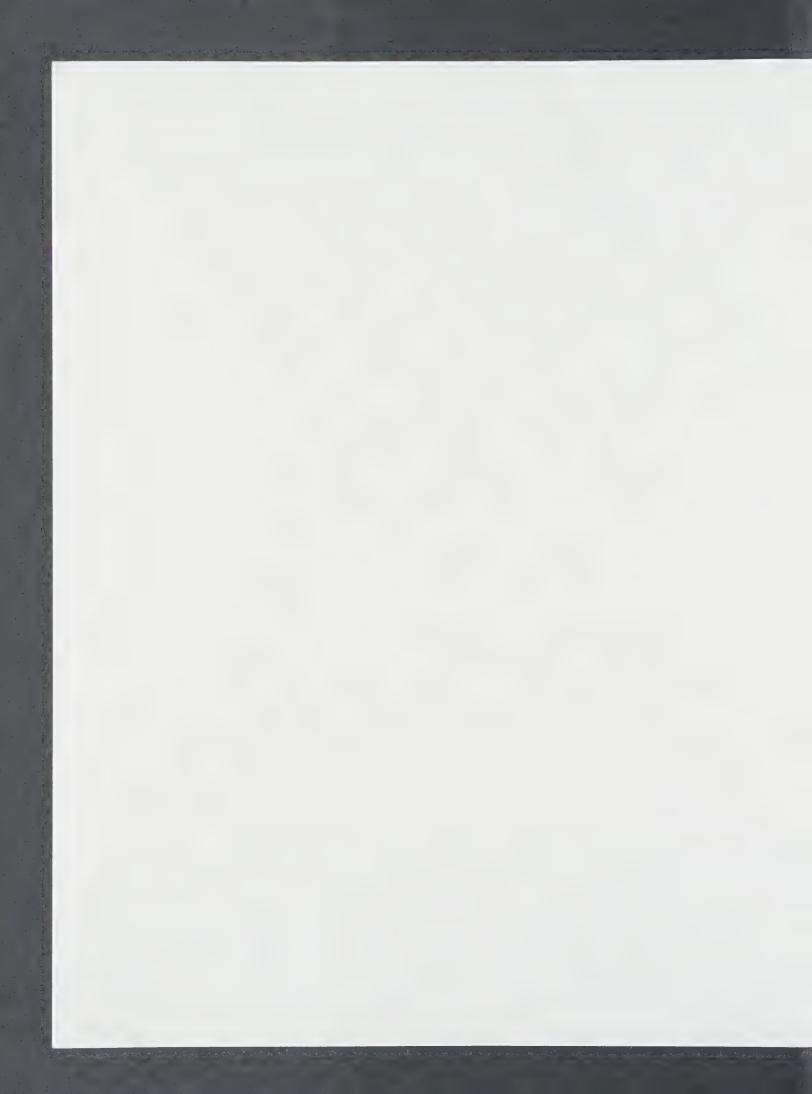
'Millionaire philanthropist' is a journalistic clich(e), but it accurately describes Alfred Bader, one of the bestloved figures in the chemical community. His is a classic rags-to-riches story _ or, rather, riches-to-rags-to-riches. It is also the story of a Jewish boy who escaped the turmoil of 1930s' Central Europe and started a new life in the New World. 2

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Bader was born in Vienna, the son of a Jewish father of Czech merchant origin, while his mother was the daughter of an ancient family of Catholic Hungarian counts. His mother's family had practically disowned her when she married, but soon after Alfred was born his father died and his mother agreed to allow her husband's sister, a returned to her family. She left the baby to wealthy widow, to adopt the baby. be adopted by a wealthy widowed aunt on his father's side.

The boy grew up in Vienna, just a few houses from where his/hero, Loschmidt had been a schoolteacher in the 19th century. He went to the local schools, where another future chemist, Carl Djerassi, was a year ahead of him. But life was getting harder: by the late 1930s his aunt's fortune had and poor investments been eaten away by inflation/ and she was penniless. At 14 Alfred was dealing in



stamps to make money for food. Worse still, the rise of the Nazis threatened war and genocide.

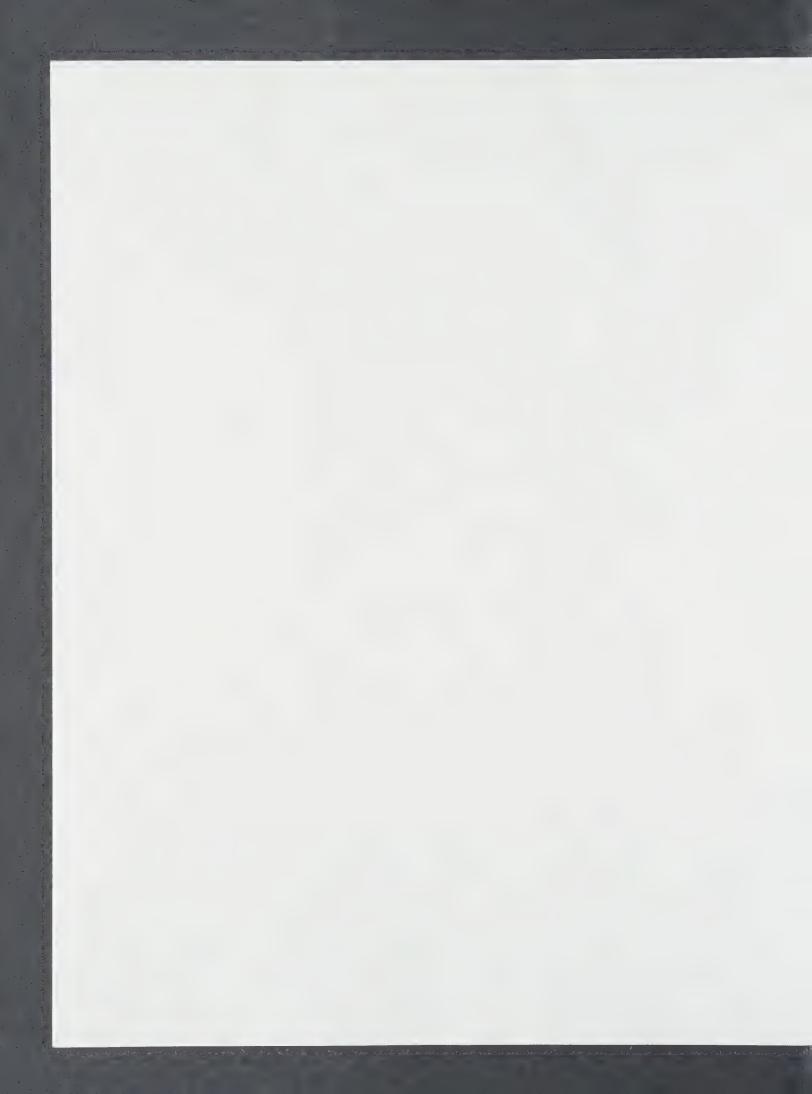
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After the anti-Jewish demonstrations of <u>Krystalnacht</u> in November 1938, the British government offered 10(:}000 entry visas to Jewish children who had no relatives outside Austria and Germany. Bader's adoptive mother the list and he was among the first boatload to arrive.

He ended up in Hove, where an old lady paid for a local family to give him board and lodging. He went to East Hove Senior School for Boys, down by the gasworks, and despite his initially rudimentary English he was placed in the A stream and was even made a prefect _ 'my first honour', he recalls. From there he went on to Brighton Technical College.

Prisoner in the free world

But with the fall of France in May 1940 the government became worried about possible spies among the refugees who had fled Nazi Europe, and so rounded them up into internment camps. 'In point of fact', Bader says, 'I don't think that a single one of them turned out to be a Nazi fifth columnist, though one of them, Klaus Fuchs,

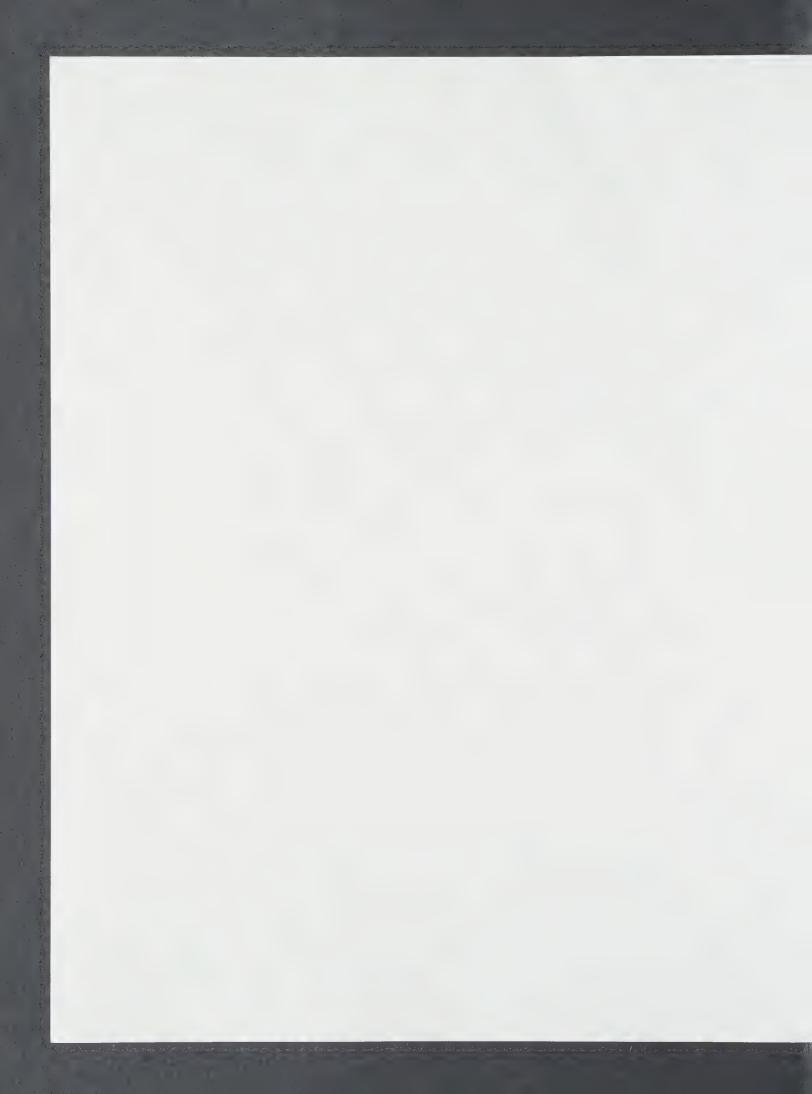


became a real spy for the Soviet Union'. Despite his youth, Bader was included in the round up and after sojourns in camps at Huyton and on the Isle of Man he was shipped to Canada (narrowly missing being sunk by Uboats). There the internees were kept in a disused fort on the US border.

Despite the primitive conditions and the attitude of their Canadian guards, who at first genuinely believed that they were spies who had parachuted into England, the Jewish internees were well treated. Young Bader attended a camp school set up by some of the academics. The student internees took the matriculation exams for McGill University and did well.

Once again Bader benefited from the spontaneous kindness of somebody he had never met. A social worker got word about the boy out to a neighbour who happened to be the son of his benefactress in Hove. This man offered to take the boy in, so Bader was one of the first internees to be released. Immediately he applied to McGill _ and it turned him down. So did the University of Toronto. But Queen's University, /Ontario, accepted him.

'Queen's was the first place I was an equal treated as a human being', Bader says; it H



explains his legendary generosity to the university. Queen's was a small and somewhat elitist university at the time _ it has a reputation for turning out future cabinet ministers _ but it was a very tolerant place.

Bader read engineering chemistry and in his summer vacations he worked at the Murphy Paint Co in Montreal, formulating lacquers, varnishes and paints. Upon graduation the company offered him a permanent job. 'It was a super job, and lucky timing, because vinyl finishes had just been developed'. This meant that paintmakers could offer enamels with previously unheard-of baking schedules. Bader would visit the customers with the salesmen, listen to their needs, and go back and formulate something for them. It taught him to listen to the customer.

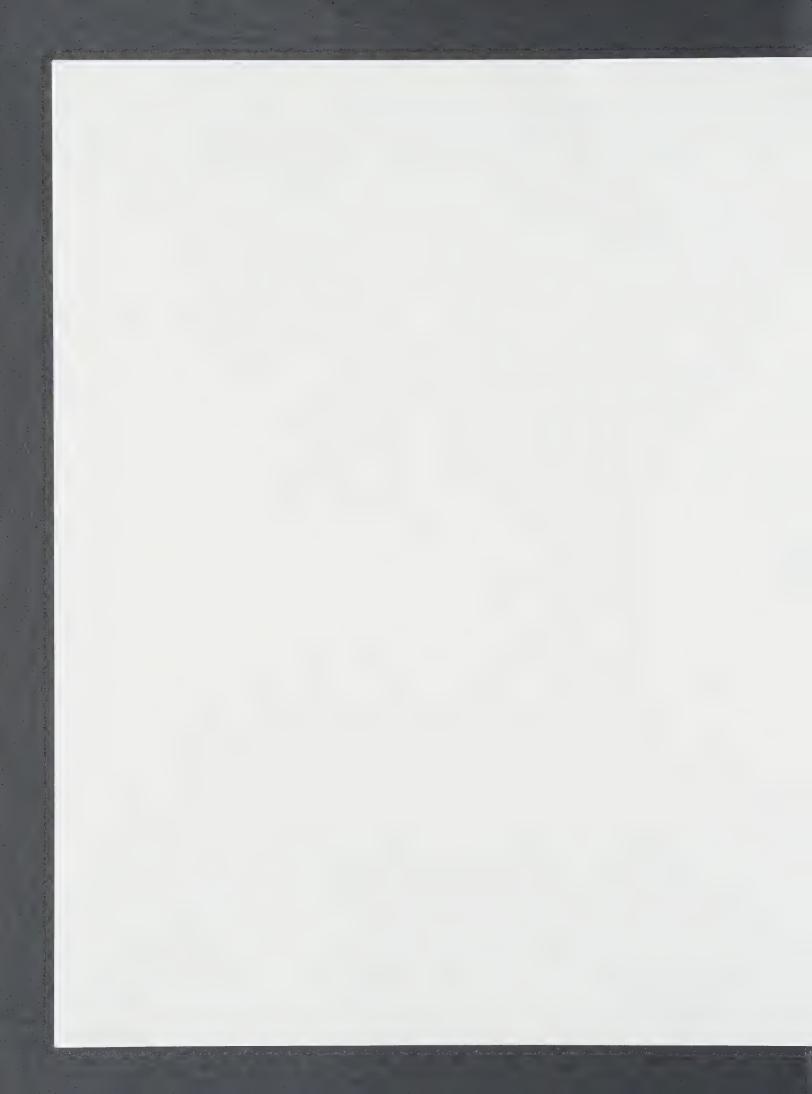
He both worked hard and 'had a ball', so he was surprised to be called in by the president, Harry Thorpe, and asked to leave. He protested, and Thorpe told that although every salesman wanted him, 'think what you could do with a PhD'. 'This was complete nonsense, of course', Bader says, but the company gave him \$1800 to get his PhD and then come back. First he went to Queen's for a year to get an MSc, then he applied to 5



what he considered the two best graduate schools: Harvard and ETH Zurich. Both accepted him, but Harvard offered a fellowship and some part time teaching, so that was where he went.

His supervisor was Louis Fieser (of 'Fieser and Fieser' textbook fame), but he hardly ever saw him. 'On a Saturday morning he gave me a problem: "This hydroxyguinone gives _ as every hydroxyquinone does _ a deep red solution in alkali. But let it stand overnight and it turns yellow. Find out what happens". A year and a half later he came into my lab and said "Alfred, how's that problem?" I said that I thought I'd solved it. "Good. Give a seminar". ' But the lack of supervision did not matter. Bader was surrounded by briliant young researchers like Robert Woodward and Gilbert Stork, who were always prepared to help and became close friends.

Bader got his PhD in two years and was offered an academic post at New Brunswick, but he felt an obligation to return to his employer. By now Murphy/had been taken over by the Pittsburgh Plate Glass Co (PPG) and all the paint research had been concentrated in Milwaukee. That city has been Bader's main home ever since. 6

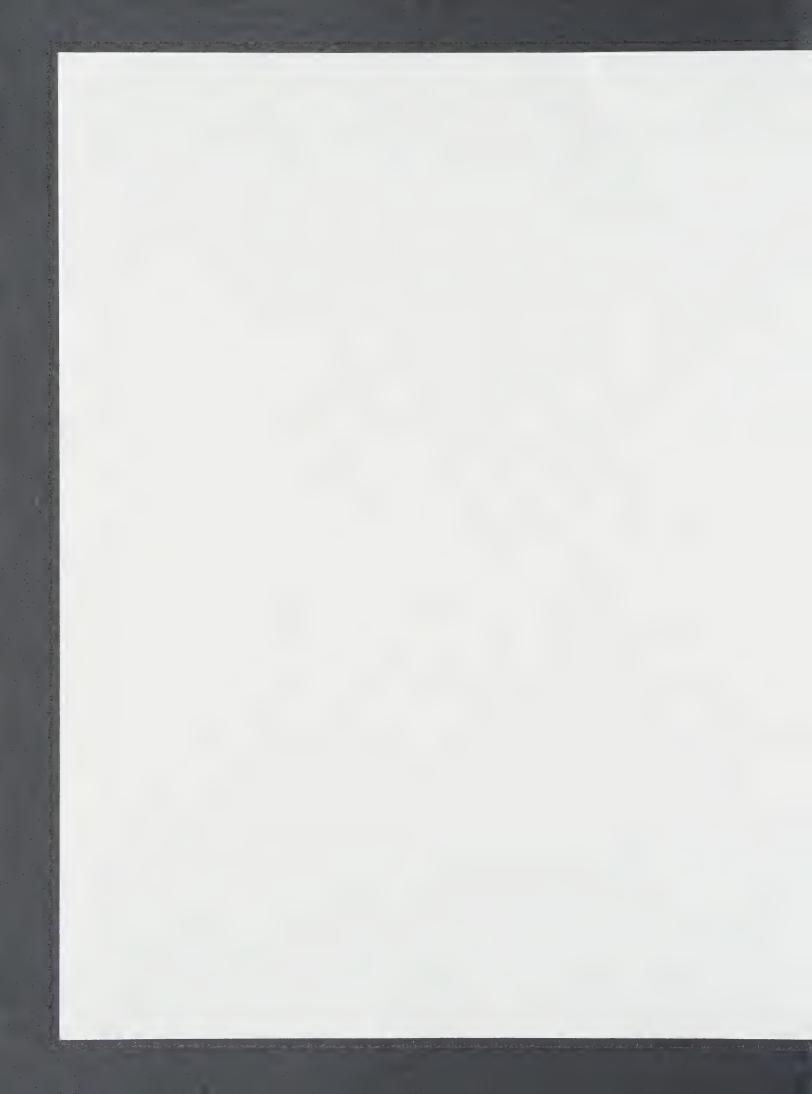


PPG's so-called research department was mainly just a paint formulation lab at the time, was encouraged to strike but Bader struck out on his own projects. He felt that the key was to make new monomers from cheap starting materials such as phenol and dienes. The literature suggested that this would not work, but Bader studied the simple case of phenol, and cyclopentadiene and found that by controlling the catalyst them he could make it work. PPG used the monomers reactions and Bader moved on to look at materials such that of levulinic acid with phenol that as/ [Tape changeover] worked ver worked very N well indeed. We took out a patent and I published it as a note in J. Am. Chem. Soc. director of research One day the president told me that Johnson Wax wanted to buy the patent, and asked how much he should ask for it. I said "This was two days' work. If you ask for \$10{:}000 we'11 you'll be amply paid. But, if they really want it ____ ask for a million and see what happens".' Johnson Wax really did want it and PPG got its \$1m.

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Taking on the big boys his

Although the research was going well, Bader was not satisfied. He suggested that he could use his lab's spare capacity to make small quantities of research chemicals for director of research sale. The president said 'Alfred, it won't



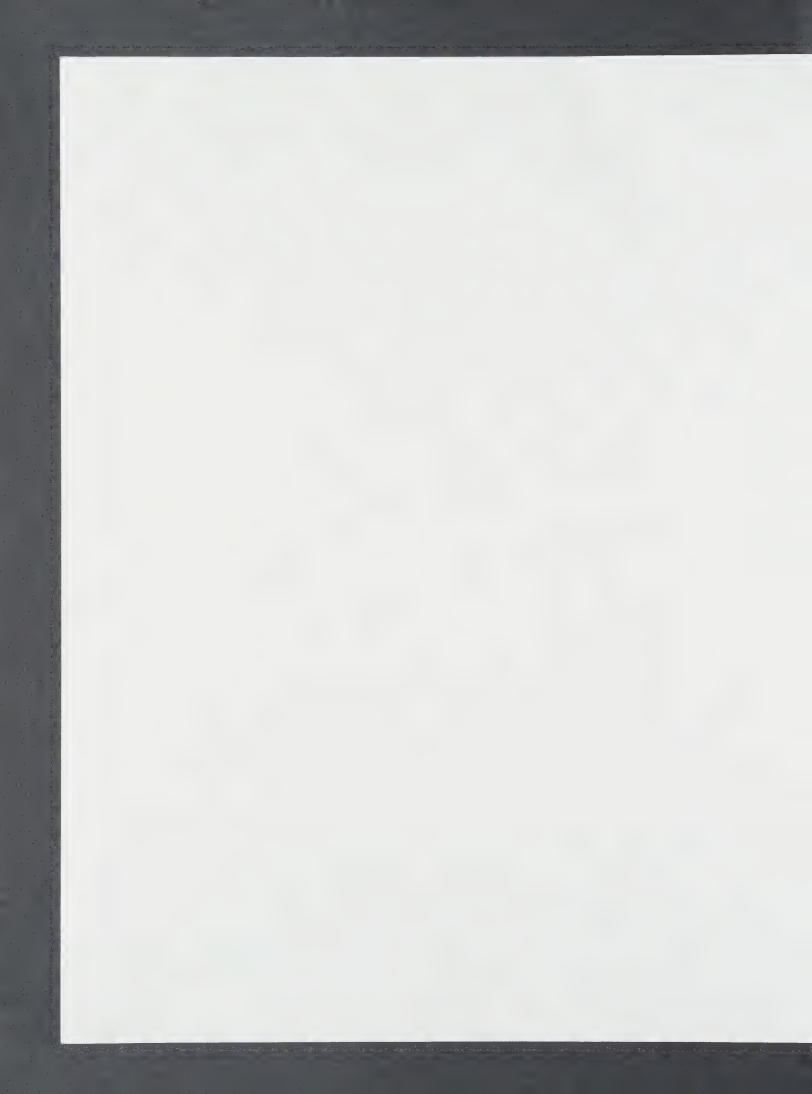
fly. Nobody, absolutely nobody, can compete with Eastman Kodak'. Nevertheless he let Bader start his own little company, working evenings and weekends.

'A friend of mine, an attorney named Jack Eisendrath, knew how to set up companies. We each put in \$250 capital and we tossed for the name. I lost. He was engaged to a charming Quaker girl from Philadelphia, Betty Aldrich, and so it was named the Aldrich Chemical Company. Our first catalogue was one sheet with one compound: methylnitrosonitroguanidine. It happened to be just about the most carcinogenic compound there is, but we didn't know it at the time--

for some years in organic chemistry _/ every student/at Harvard made it!' Years later a doctor doing research on the effects of nitrosamines approached Bader and asked him to take a medical. Five years later he followed it up again. He could not understand why Bader and the people at Eastman Kodak who had made batches of this nitrosamines carcinogen were still so well. 'I said,

"Doctor, that's your problem".'

At first Aldrich was a purely part time operation. Sales rose: \$5400 in year two; the research laboratories \$15{:}000 in year three. Then PPG moved/to Pittsburgh. Bader did not want to move, so he struck out on his own, doing some part



time teaching to supplement his income. But the business continued to grow.

Building strong bonds

Early on he devised a method of working that he maintained until last year. Reasoning that '90 per cent of the best academic research in the world is done in 10 per cent of the universities', he began touring the top research universities in North America and Europe. He would learn about the new compounds they were making, and what they needed, and every evening he wrote a long report to his colleagues in Milwaukee describing his findings. Researchers would show him manuscripts they had submitted for publication and he would/ensure that the new compounds were available as soon as they were published _/Aldrich would/ take an advertisement in the same issue, of the journal concerned.

He became a familiar figure in chemistry departments, getting to know people personally, following their careers. He would talk to the research students: 'Gilbert Stork's students would all be on of the sixth floor at Chandler at Columbia University; two years later they would be postdocs at/ETH, say, and I would see them



there, and two years further on they would be assistant professors at somewhere like the University of Iowa. It was these links that helped us to get new compounds'. Nor did he neglect to cultivate the stockroom managers, who actually bought the chemicals and were invaluable contacts. 'Sure, I slept in a different bed each night, but so what? We went to the major universities _ you can't be everywhere. But you established personal relationships. You can say that (<u>a</u>) it's an ego trip and (<u>b</u>) that it's selfish because it helps the company with new products, but it's also such a pure pleasure and such fine give and take'.

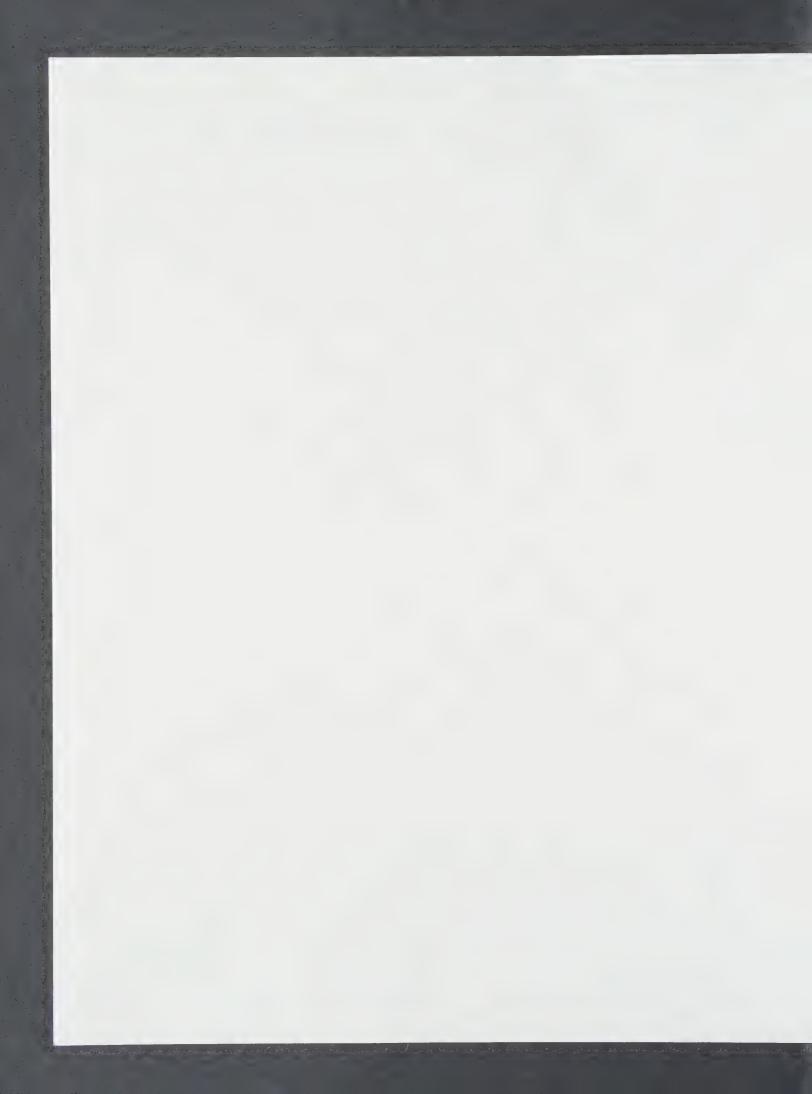
Bader built up similarly close relations with Aldrich's suppliers. In the early days particularly, the company's production capacity was small and it bought in 95 per cent of its products (today it has a 500 acre site and makes 40 per cent of its own products, some on tonnage scales). Bader built links with smaller, specialist suppliers, many of them in the UK _ Aldrich had contracts with Coalite for coal tarderived compounds as early as 1952. Some of the products have blossomed from research compounds in the Aldrich catalogue into major tonnage contracts for the suppliers.

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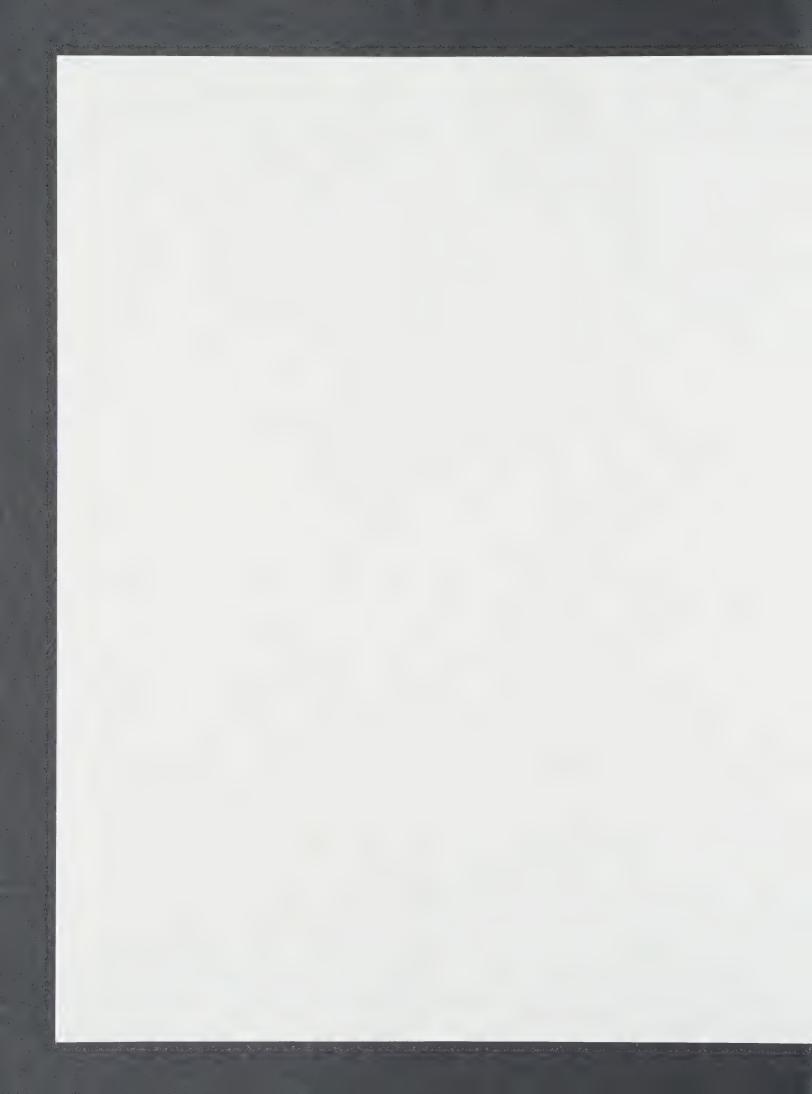


At one point Aldrich accounted for 1 per cent of UK overseas sales of chemicals _ a remarkable figure given the tiny quantities involved in most cases.

Aldrich even launched its own journal, Aldrichimica Acta, containing/papers from winners of the Bader awards that he had established at different institutions. Its covers became its trademark, depicting old master paintings from Bader's growing collection. These were unrelated to chemistry, but the marketing man who thought of putting art on the cover of the journal the catalogue (against Bader's and instincts) created a distinctive image for the company. By 1965 sales had reached \$2m pa and Aldrich stock had gone public.

Doubling the impact

In 1967 Bader approached Sigma, a St Louisbased catalogue firm specialising in biochemicals. Sigma, Bader reasoned, was a although larger than similar size to Aldrich, and had a complementary range; he suggested merger. 'The response was "get outa here" and I was almost physically thrown out!'. However, after a disappointing stock market listing in 1972, Sigma reconsidered and the merged firm Sigma{-}Aldrich came into existence in

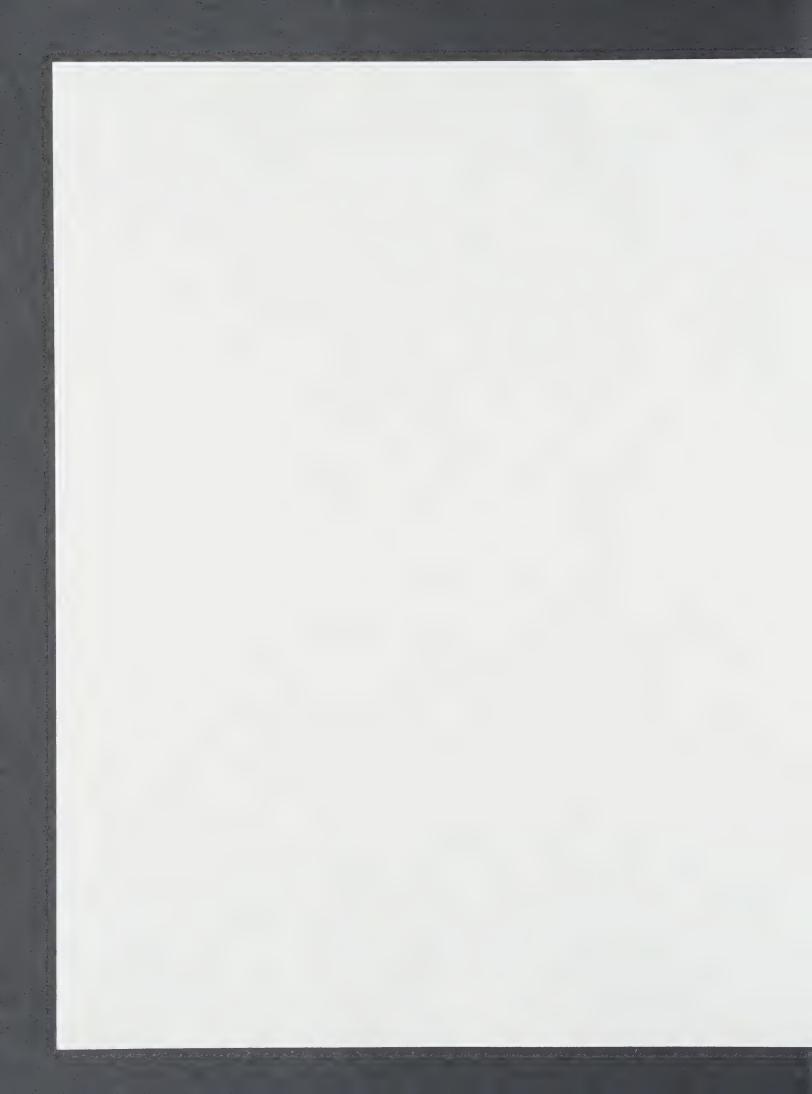


August 1975.

The merger brought together two very different cultures. Dan Broida, boss of Sigma, did not have much time for academics: many to him they were all 'idiots'. Bader, on the other hand, had built Aldrich on his extensive academic contacts. Sigma would make a chemical, and if an academic inventor had a patent on it _ well, let him sue. Aldrich, by contrast, offered a royalty whether the academic had a patent or not. (Bader reasons that it is cheaper to pay the inventor to teach you how to make the compound than to repeat the development work yourself.)

Nevertheless, the harder-nosed Sigma had things to teach Aldrich. For instance, sameday order fulfilment was almost a religion, whereas Aldrich had been happy if the batch went out within a couple of days. The same applied to purity. Aldrich would accept a 97 per cent pure compound with a yellowish colour; Sigma insisted on it being 99 per cent and white, even if the price was 3(-)4 times higher. The synergy between the companies worked well.

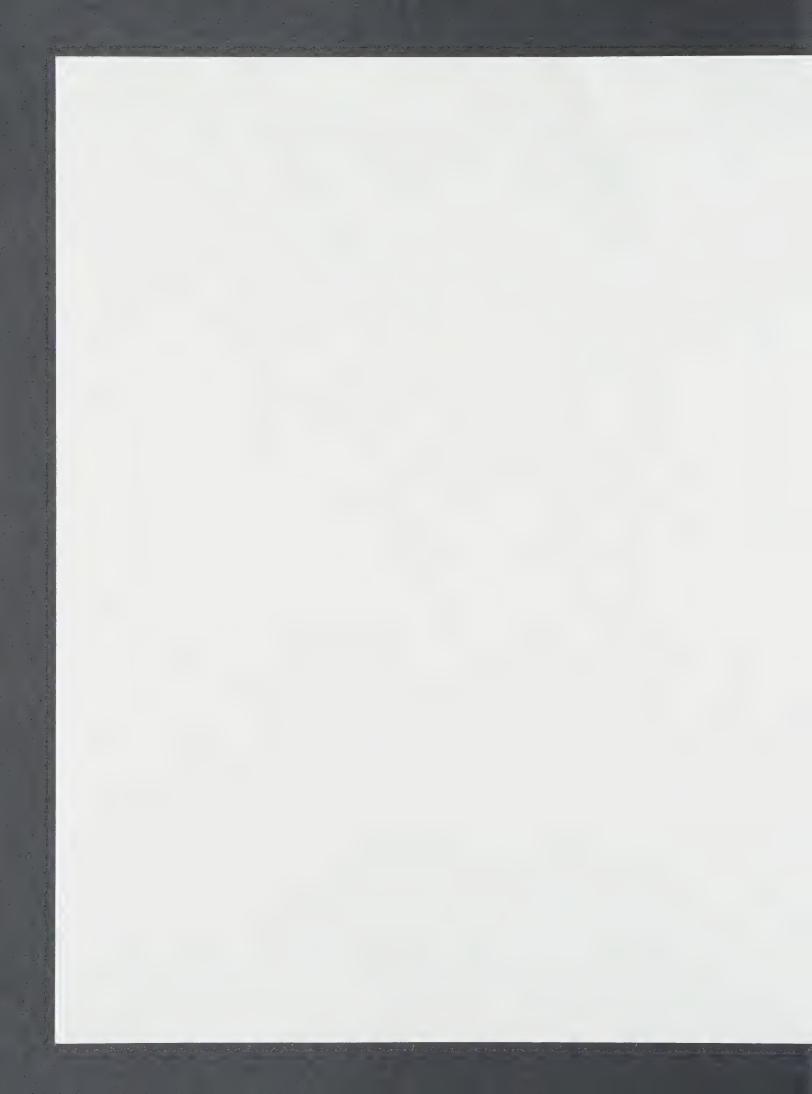
When Bader retired in 1991, Sigma{-}Aldrich's sales exceeded \$500m pa. He intended to remain as chairman emeritus and



continue travelling the world's labs on the company's behalf until he dropped. However his successor, him the new president, Tom Cori, had Bader thrown off the board following a dispute *** /over share dealings. The one board member Several other board who supported Bader was ousted also. members have also been ousted.

The news that the new regime at Sigma {-}Aldrich had forced Bader from the board became a <u>cause c{e}l{e}bre</u> in the chemical community, with Bader supporters writing letters of protest to the chemistry press (<u>Chem. Br.</u>, 1992, 28, 496; 779). Bader was very bitter, but now he has begun to see a silver lining. No longer constrained by board membership, he is free to sell stock in the company to fund his philanthropic interests.

Bader's endowments began in 1948, when he used a bequest from his Montreal benefactor, Martin Woolff, to set up a prize at Queen's University. Since then he has endowed many Bader prizes, fellowships and chairs related to his twin interests in chemistry and art. He has founded the RSC's Alfred Bader and Josef Loschmidt awards, he has given Imperial College generous funds to assist Czech students to study chemistry in London, and many British academics are grateful for grants he gave them to help their research. 12



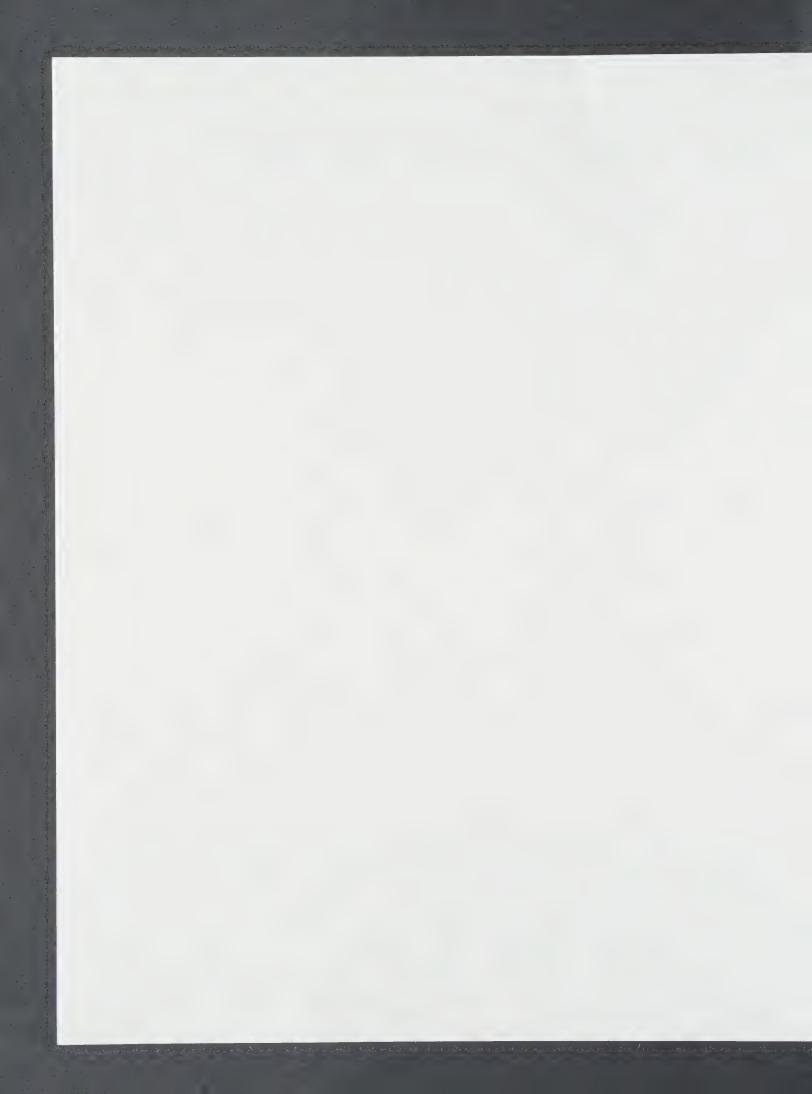
(Bader believes that relatively small amounts of funding go further in the UK, which makes it cost effective to support chemists here.) Along the way he has also picked up honours himself, such as the symposium held in his honour at Harvard earlier this year.

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From paint to paintings

Bader bought his first piece of art, a drawing, as a boy in Vienna. Later, in Canada, he commissioned an artist in the internment camp to paint his portrait to send to his adopted mother. (She had died in a Nazi concentration camp and never received it.) He began collecting seriously while at Harvard, when lesser old masters were little regarded and could be picked up relatively cheaply. He has always been interested in history _ he even took a history BA/part time while working at Murphys and speculates that perhaps his training as a paint chemist sharpened his interest in paintings and in picture restoration. Over the past 40 years he has built up a formidable collection, specialising in Dutch 17th century paintings by pupils of Rembrandt. His knowledge is widely recognised: twice he has served as guest



the curator for exhibitions at/Milwaukee Art D Museum, including The detective's gye: I 0 M Investigating the dld masters which he and

his wife assembled in 1989.

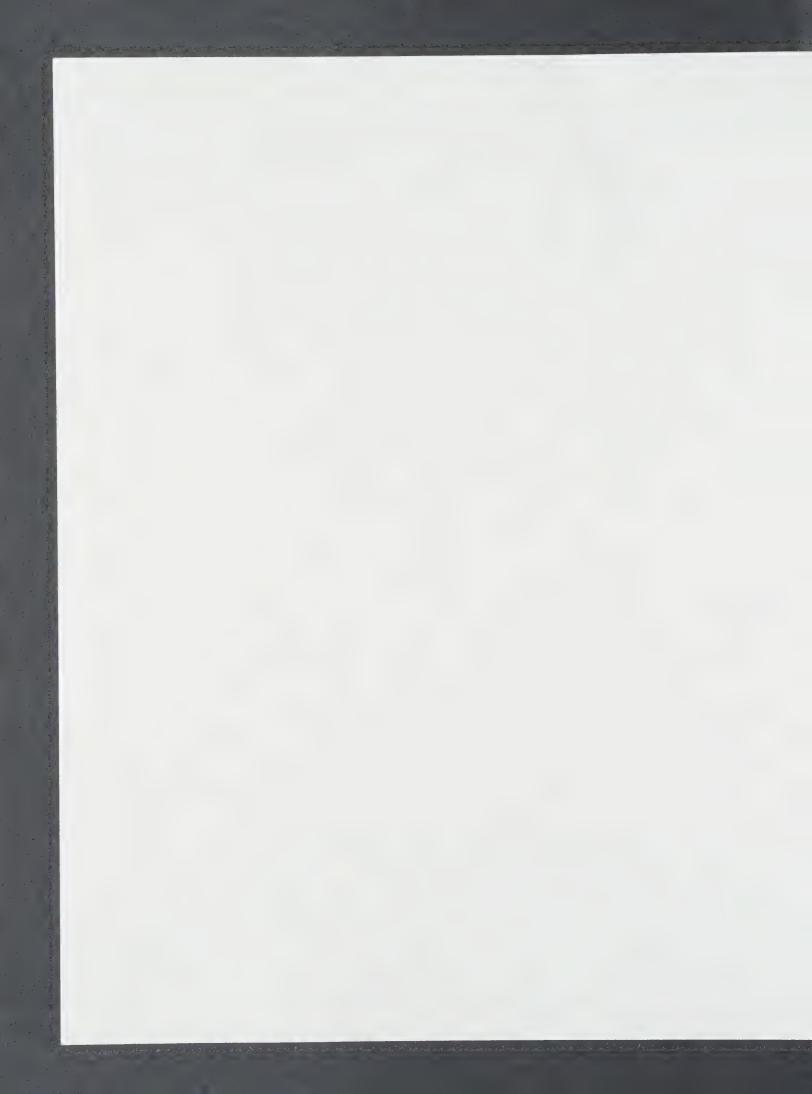
the first of several

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In the 1950s he established/an artists' scholarships scholarship at Queen's. Later he provided a

fund _ now standing at over \$1m _ to allow art history students to come to Europe to study. 'Supposing that somebody at Queen's is interested in Canaletto, or Tiepolo, he should be able to study for a few months in interested in) students, Venice. Or if he is/a Rembrandt student to study in Amsterdam or Leiden'. He has given funds to other universities for this, and he has recently endowed a chair in Dutch art history at Queen's. Many of his paintings hang in museums around the US, but he plans most to leave the rest of his collection to Queen's _ provided it builds an art museum and his family have given (he / has provided \$2m of seed money). Otherwise, galleries will be queuing up to secure the collection.

Bader has always dealt in pictures as well as simply collecting, and his greatest coups in the art world have occurred since his split with Sigma(-)Aldrich left him free to sell shares and raise the level of his activities. Last year a Rembrandt came up for auction in London, and Bader and his



associate Otto Naumann decided to bid for it. They secured the painting for £3.8m, which was considerably below the maximum they had set for themselves. Within days they were approached by the Rijksmuseum in Amsterdam, which desperately wanted the insufficient painting but had had no funds with which to bid. They hammered out a deal by which the museum would be given time to raise \$10m _ enough to cover Bader's costs, the also auctioneer's fee and the tax, and still reasonable leave him with a small symbolic profit. 'It's such a feather in my cap, to buy a major Rembrandt and sell it to the Rijksmuseum. How many chemists do that!' Bader chuckles.

Since then he has bought a Rubens <u>Entombment</u> 'ghastly, bloody, but a wonderful work of art', as he describes it. It was an unremarked auction lot/with a low reserve but Bader was sure that it was all Rubens, and not just a studio work with a few touches of the master. The Getty Museum agreed, and has since bought it from him.

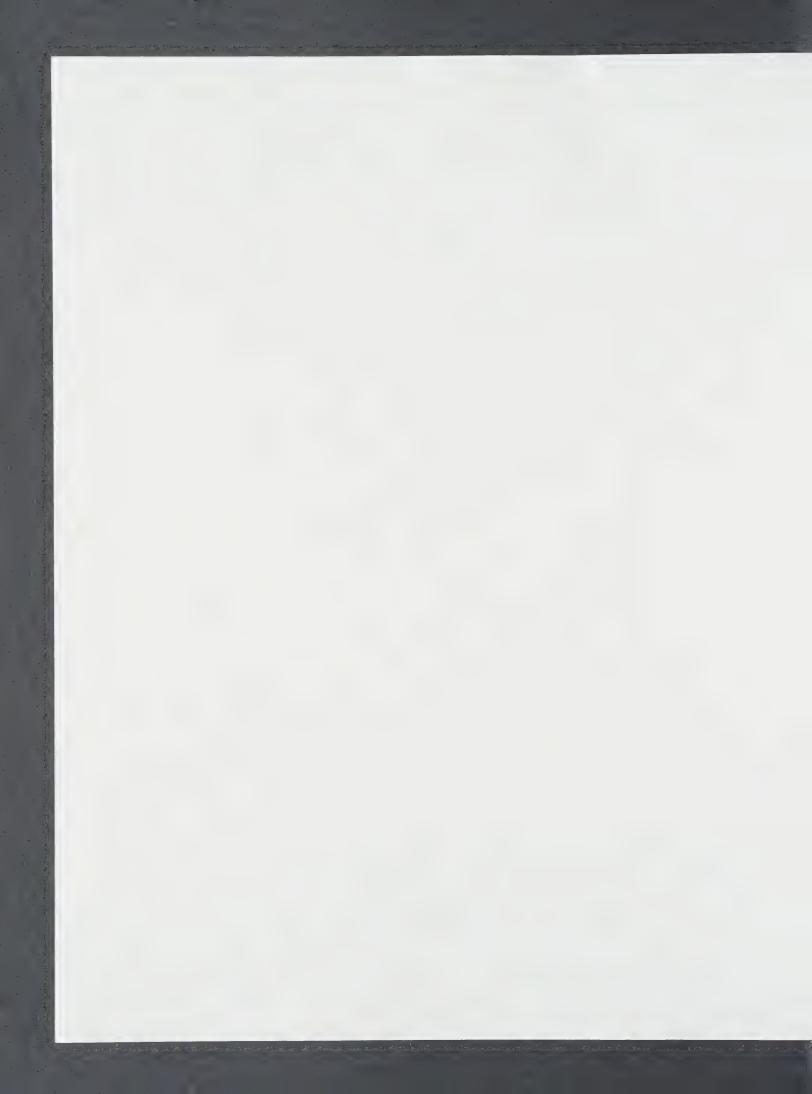
A few of Bader's 17th century paintings are of alchemical scenes, but these are relatively uncommon. He is currently researching a 19th century painting of a chemical experiment that he bought recently,



which he believes may depict Brande and Faraday synthesising Prussian blue. Bader's historical interests extend to history of chemistry as well. A paper by William Wiswesser on Josef Loschmidt in <u>Aldrichimica his</u> <u>Acta</u> sparked <u>Bader's</u> interest in the Viennese schoolteacher, and his researches in collaboration with Christian Noe led to a lively controversy earlier this year (<u>Chem. Br.</u>, 1993, 29, 126; 401; 675).

This summer Bader completed what he regards as his greatest coup. He Anas a house in Bexhill-on-Sea where he lives when in the UK. Last summer he saw that the nearby castle at Herstmonceux was the for sale. Until the late 1980s it was the base of the Royal Greenwich Observatory. Then it was sold to a hotel developer, which went into bank, Guinness Mahon, receivership, and the/banks had been trying to sell this unusual asset for some time. Bader's wife joked that it would have too many rooms to clean, but they went along to view the property 'for a lark'. Bader realised that the castle and its outbuildings would make a magnificent calmpus for Queen's University.

The first problem was to convince the estate agents that they were not another couple of timewasters (he says that he was



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glad they did not ask for his address - the little house in Bexhill falls into Council Tax Band C). He told them to get a credit reference from Sotheby's - whose auctioneers had just sold him a Rembrandt!

Then began a tough round of negotiations. Queen's welcomed the idea of a European base, but quite reasonably asked Bader to give them a large sum to begin converting the estate. The Baders' gift to Queen's came to £6m considerably less than the government had been paid by the developer. In July this year several thousand local people crowded into the castle's grounds for a 'medieval pageant and summer fayre' celebrating the official reopening of the grounds to the public.

Bader constantly refers to 'we'. In his travels around the world visiting universities and suppliers during the last 11 years he has always been accompanied by his wife Isabel he jokes that she knows more chemists than any woman alive.

Endowments and gifts have always been a family concern. His first wife, Helen, worked for many years with Alzheimer's patients and was very supportive of Jewish education,



children at risk and organizations such as the Legal Aid Society. The Helen Bader Foundation, established in her will, is headed by their younger son and now employs eight people studying requests for financial assistance and attempting to make a real difference in the areas of Helen's particular interests.

Alfred and Isabel's wills (like that of his first wife) leave everything to charitable foundations. "We want to help in North America, Britain and Israel; we want to help Queen's, and we want to help chemistry', he says. Bader also wants to support Czech chemists - 'Czechs are victims of geography', he laments, 'yet they have a fine reputation in chemistry.'

Disarmingly, Bader will tell you that he's on an ego trip. 'We would like to spend the money while we're still alive. If I hadn't been dismissed from Sigma-Aldrich many of these silver linings would not have come about. Why shouldn't we enjoy some of this in our lifetimes?' Chemists around the world who have benefited from the Baders' friendship will not begrudge them that pleasure.

