

Alfred Bober Fonds

Correspondence

Netherlands
1992-94

QUEEN'S UNIVERSITY ARCHIVES	
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**THERMO
CHEMICAL
SERVICES**

Dr. Ulfert E. Wiersum

Dr. S. Branca
Aldrich Chemical Company,
1001 West St Paul Ave. Milwaukee,
Wisconsin 53233 USA.

Your reference/Your letter	Our reference	Telephone (085)	Telefax (085)	Velp
Summary of TCS Chemicals		663536	621153	November 1994

Dear Steve,

TCS has presently produced and can supply the following chemicals:

- 1. Biphenylene
- 2. Tetraphenylene
- 3. Benzo[k]fluoranthene
- 4. 1-Aminobenzotriazole
- 5. Benzo[b]naphtho[2,3-d]thiophene
- 6. 2,2':5,5'-Terthiophene
- 7. 2,3-Benzofluoranthene
- 8. Chrysene 99%
- 9. Benzoninhydrin
- 10. 1,2,3,6,6,8,11,12-Octahydrobenzo[e]pyrene-9-(10H)one
- 11. Aceanthrenequinone
- 12. Triptycene
- 13. Hexahdropyrene
- 14. Benzo[b]naphtho[2,3-d] furan
- 15. 1-Nitropyrene
- 16. 3-Nitrofluoranthene
- 17. 6-Nitrochrysene
- 18. 1-Aminopyrene
- 19. 3-Aminofluoranthene
- 20. 6-Aminochrysene
- 21. N-1-pyrenylmaleimid
- 22. Triphenylene
- 23. 2,3-Naphthahlenedicarbonitrile
- 24. 7,12-Dicyanobenzofluoranthene
- 25. 7,12-fluoranthenedicarboxaldehyde
- 26. 4,4'-Dicyanobibenzyl
- 27. 4-Bromo-3-nitrobiphenyl
- 28. Acenaphtho[1,2-b]quinoxalin
- 30. o-Dibenzoylbenzene
- 31. 1,3-Diphenylbenzo[c]thiophene
- 32. Benzo[e]pyrene

- Purchased by Aldrich from TCS
- Not in the Aldrich Catalog



PHARM
CHEMICAL

Environmental References

- 33. Benzo[ghi]fluoranthene }
- 34. Cyclopenta[c,d]pyrene }
- 35. 2,3-Naphthalenedicarboxaldehyde
- 36. 1,1,4,4-Tetraethoxy-2-butyne
- 37. Lucifer Yellow-CH
- 38. 1,2,3,4-Dibenzanthracene
- 39. 2,3-Benzanthracene (naphthacene)
- 40. 1-Hydroxypyrene
- 41. 2-t-butylantracene
- 42. trans-2-cyclohexene-1,4-diol
- 43. 2-Aminoanthracene
- 44. 1,4-di(2-thienyl)butane-1,4-dione

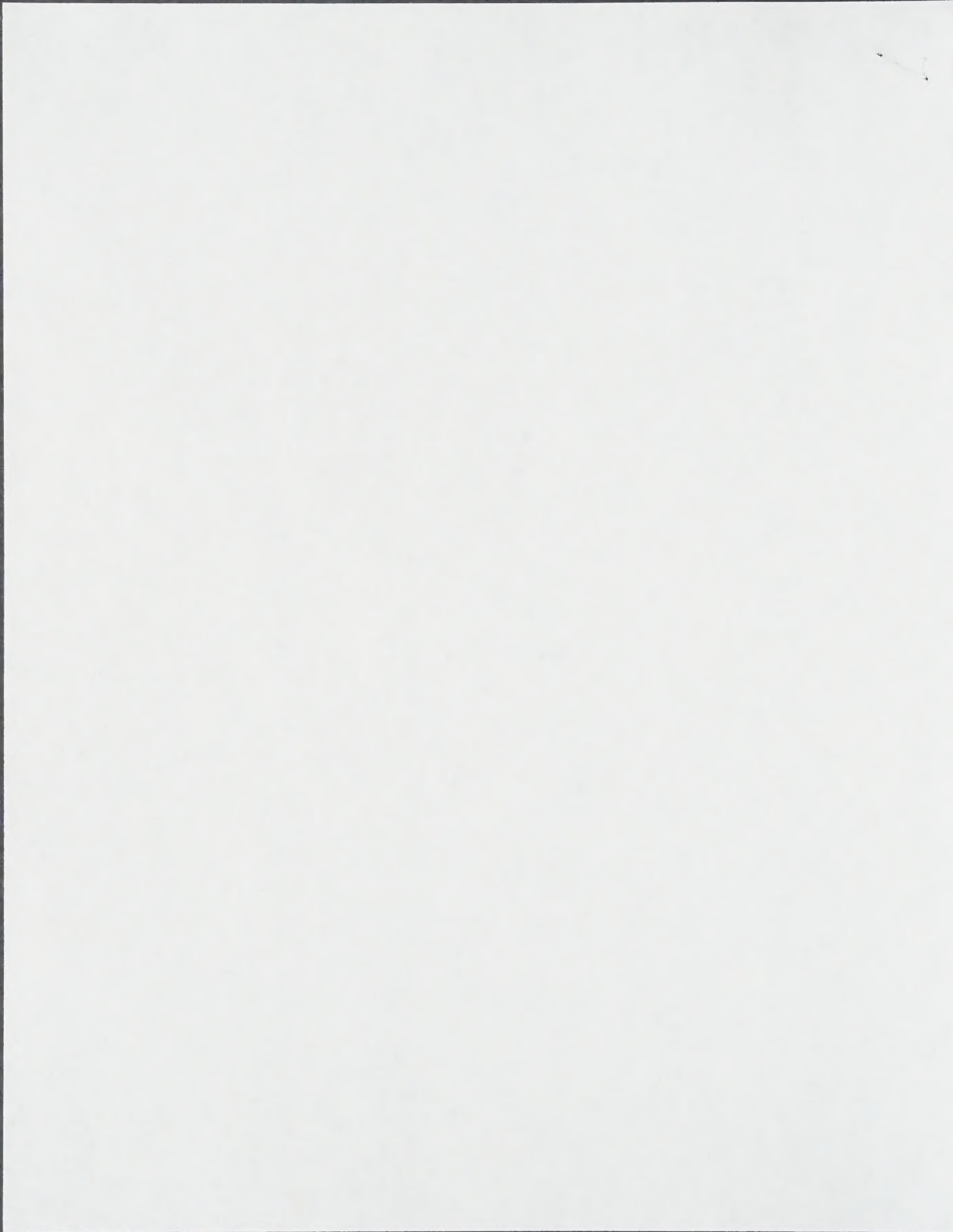
We are especially interested in producing polyaromatics (PAH). FVT of PAH constitutes an essential part of our scientific research. This is presently done in cooperation with the University of Utrecht. We focus on the formation and interconversion mechanisms of PAH, cyclopenta-PAH nitro-PAH and hetero-PAH, see for example J.C.S. Chem. Commun., 1994, 89 and Tetrahedron Lett., 1994, 35, 4405.

These products and their thermal interconversions are of great significance because they are combustion emittants. New commercially available PAH's are sought as reference compounds in environmental programs.

Best regards,

Ulfert Wiersum

Produced by Kluwer from TCS
for the Kluwer group



Dr. Alfred Bader
2961 North Shepard Avenue
Milwaukee, Wisconsin 53211

January 18, 1993

Dr. Ulfert Wiersum
Thermo Chemical Services
Alteveerselaan 6
6881 AV Velp
The Netherlands

Dear Dr. Wiersum:

Thank you so much for your kind letter of December 30, 1992

I am glad to know that you like the painting by John Whalley. I like this artist very much and enclose a description from an exhibition catalog, of which I only have one copy.

I very much hope that your own chemical business will really keep growing.

All good wishes.

Sincerely,

Enclosure



THERMO
CHEMICAL
SERVICES

Dr. Ulfert E. Wiersum

SPECIALISTS IN PYROLYTIC REACTIONS

Dr & Mrs Alfred Bader
2961 N Shepard Avn.
Milwaukee Wisconsin
53233 USA

Your reference/Your letter

Our reference

Telephone (085)

Telefax (085)

Velp

663536

621153

Dec 30 1992

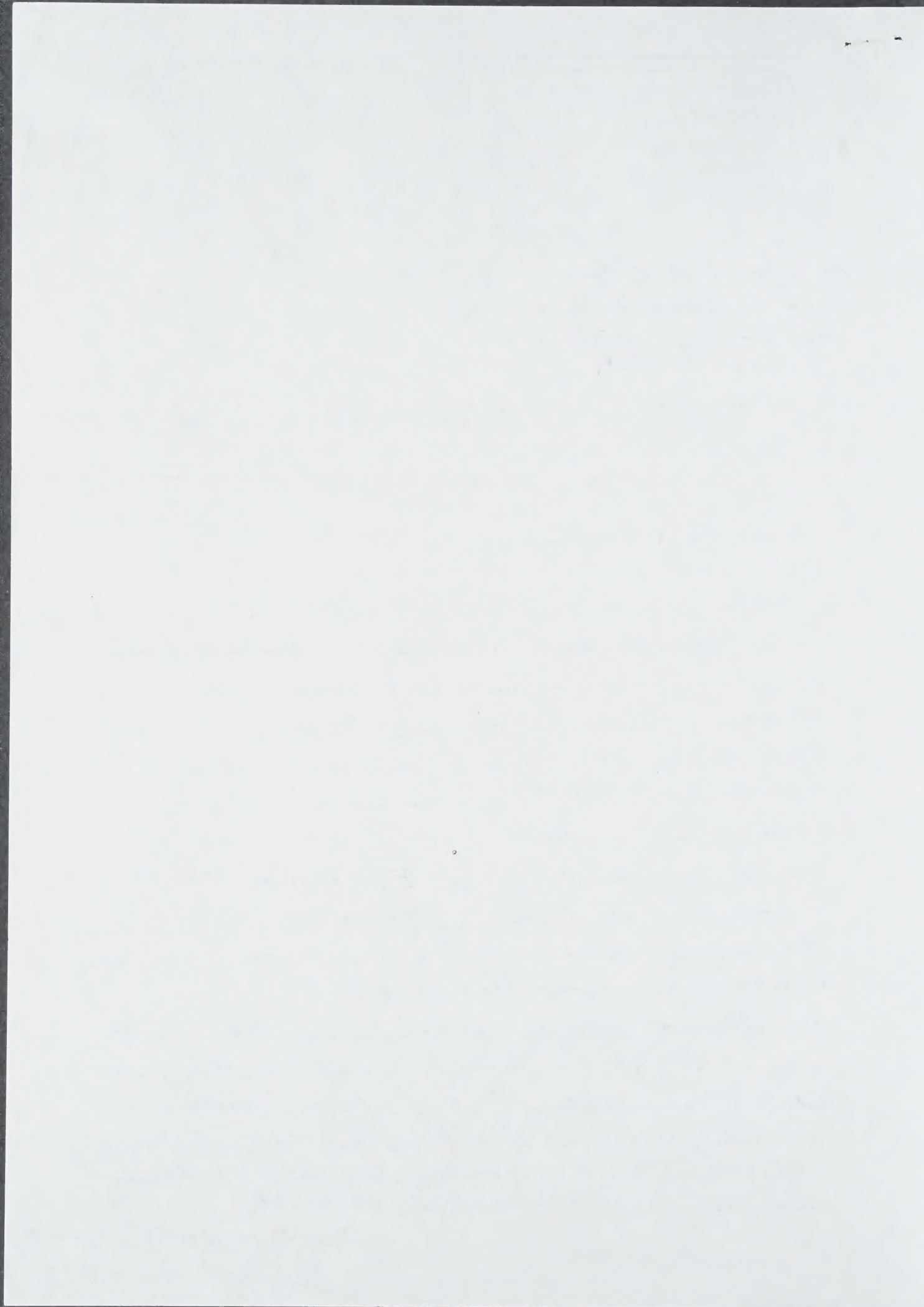
Dear Dr & Mrs Bader:

Please receive my best wishes for 1993.

This last year must have been a turbulent one for you. The "Johannes Lytkenbogaert" got a prominent place in our Rijk's Museum. My brother went to see it. One of your recent Aldrich reproductions was "The farm scale", 1982, by John Whalley, which I found very nice. We bought some paintings of Enno Brokke, who is almost my neighbour. His work, I found, is reminiscent with Whalley's. Do you have any information about this painter?

My sales of pyrolytic chemicals doubled in 1992, but it is still a hobby. In addition, they gave me a coordinative job in Akzo's program (40 many years research!) to develop high tech electronic polymers. This is interesting, but does not leave much time for the chemicals presently.

Best regards, Sincerely
Ulfert Wiersum





Research
Laboratories Arnhem

Dr Alfred Bader
2961 N. Shepard Avn
53233 Milwaukee USA

Telex (085)
621153

Arnhem
August 14 1992

Dear Dr Bader:

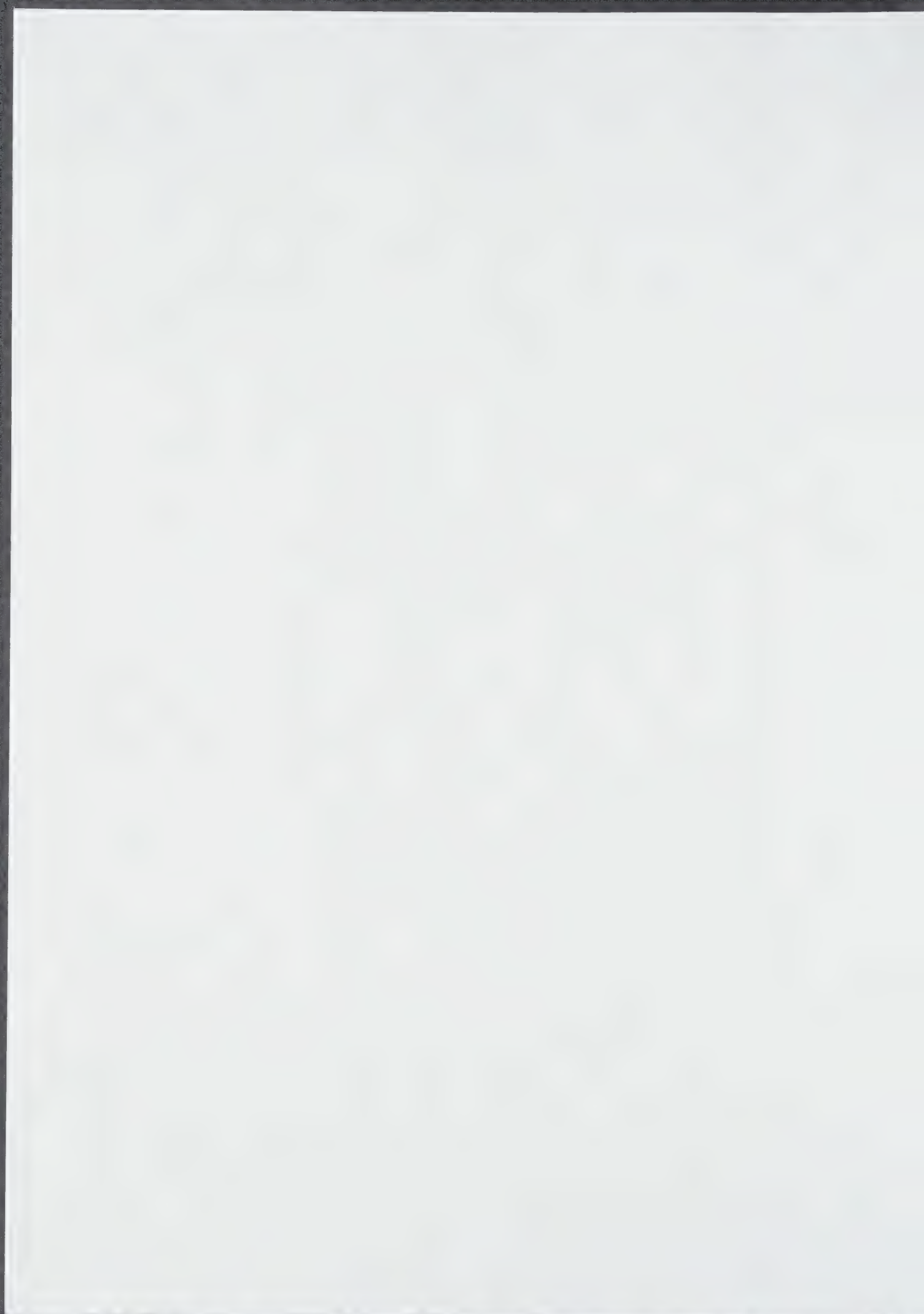
Please find enclosed some articles in the dutch cultural newspaper, that I had put aside in my copy of your "detectives eye" book. It shows that there is a lot going on, and it might be of interest to you. I had such a good trip to the US last time and found it a most enjoyable evening that I spend with you and your wife.

Many thanks and best regards to both of you.

Sincerely,

Wijert Wiersma

AKZO
Research
Laboratory
PO Box 4000
3720 CA Arnhem
The Netherlands
Telephone (085) 48 70 00
Telex (085) 48 70 00
Fax (085) 48 70 00
Research Laboratories Arnhem
Dutch
NL-3720 ARNH



Dr. Alfred Baden
2961 North Shepard Avenue
Milwaukee, Wisconsin 53211

January 4, 1994

Professor Dr. J. C. J. Bart
DSM Research
P.O. Box 18
6160 MD Geleen
The Netherlands

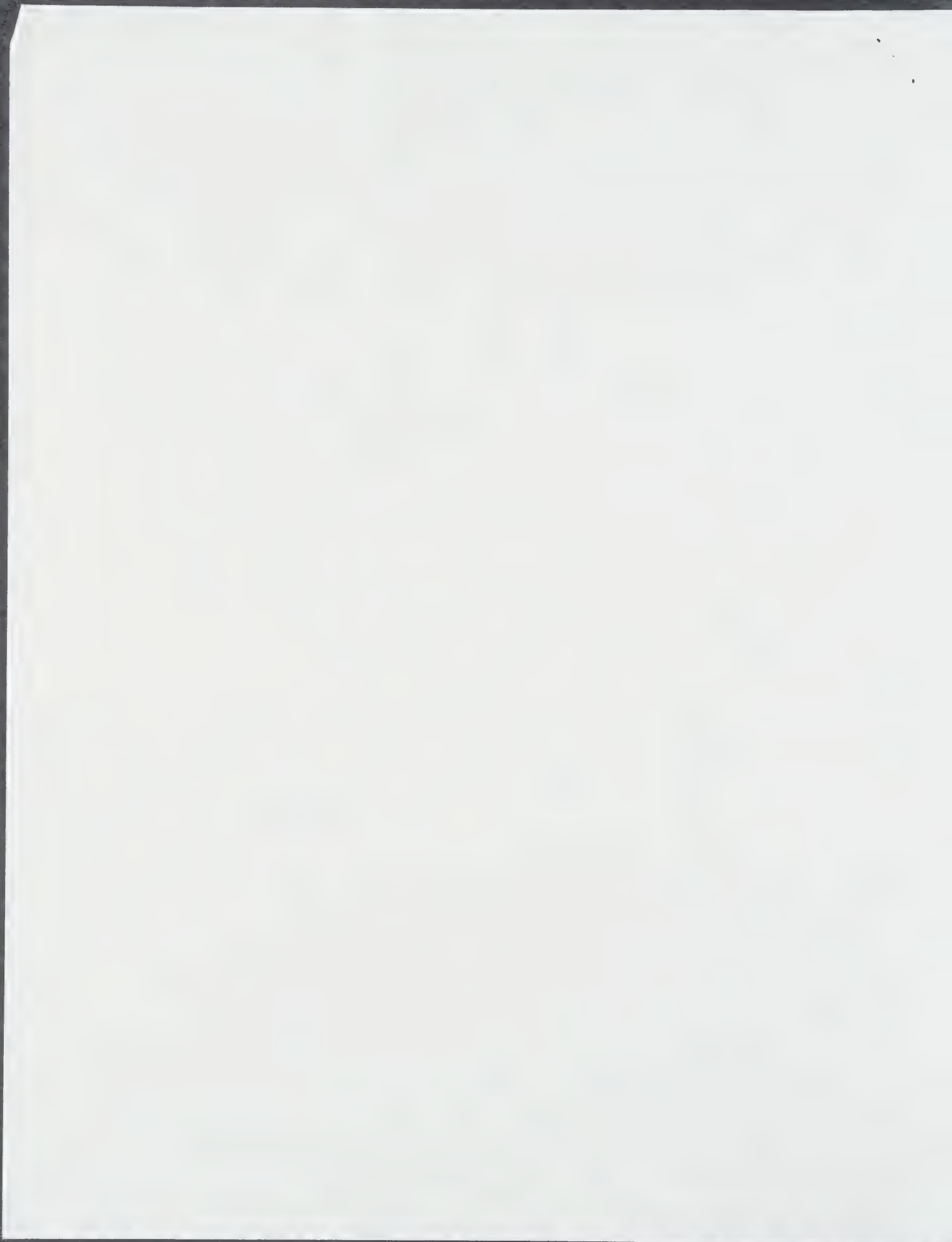
Dear Professor Bart:

Thank you for your most interesting letter of December 6, 1993, and the Romanian enclosures.

Undoubtedly, they deserve help. You know that I am really interested in paintings and also in helping chemists, but I just don't believe I can spread myself to thinly to help fund such a project in a country to which I have absolutely no connection.

All good wishes.

Sincerely,



P.O. Box 18, 6160 MD Geleen, The Netherlands
Telephone (31) 46 761111, Telefax (31) 46 767244
Telex 36777 DSM NL * ACP, Telegramaddress: Centralab Geleer

Dr. Alfred Bader
2961 North Shepard Avenue
Milwaukee, Wisconsin 53211
USA

Your reference

Our reference
B 93 7682

Direct line

Geleer:
December 6th, 1993

Dear Dr. Bader,

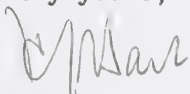
It was a pleasure to read your portrait in Chem. Brit. 919 (1993), especially as I share with you interests in chemistry, paintings and (picture) restoration (cfr. copies of a few posters - unfortunately in Dutch language).

The reason for contacting you is related to funding of Mrs. Nacu's restoration studio for wooden panels (icons as well as Western painted panels) at the (damaged) National Museum of Art (MNA) in Bucharest. Although various proposals have been launched to EEC-Brussels over the past few years, little has been achieved, apart from being able to give a 1 wk course on Applied Chemistry for Restorers. Recently I have set myself once again to readapt a previous proposal to conform to new EEC/CEE priorities, which however do not explicitly mention the "arts". Consequently, I am not exceedingly optimistic about funding. Yet, as you may see from the proposal, which certainly makes interesting reading for you in view of your specific interests, there is a genuine need for such funding, especially as many of the most essential tools are largely inaccessible for the Romanian equipe.

Nevertheless, they have managed to hold various successful exhibits in Europe (a catalogue is added for your pleasure).

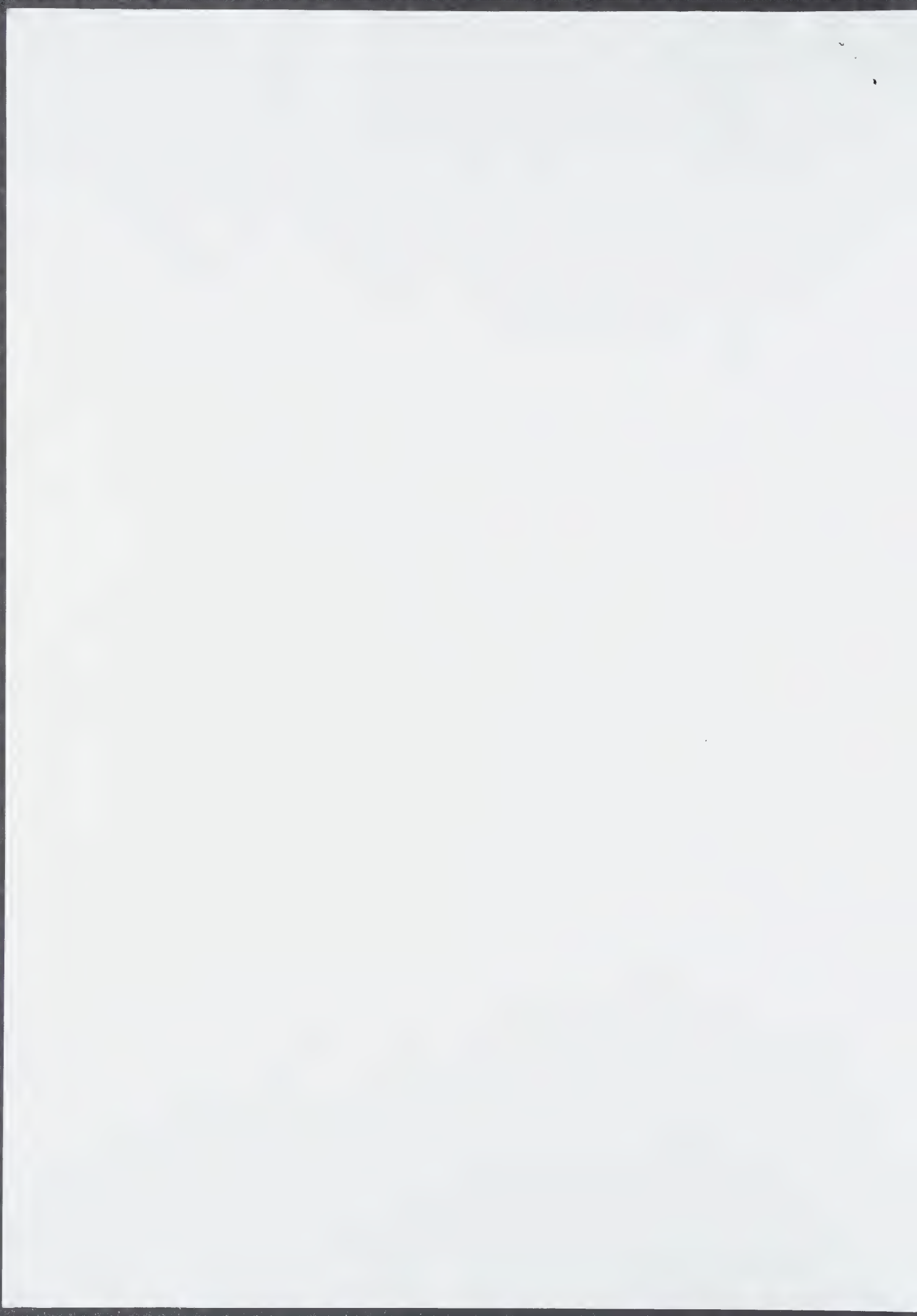
It is my hope that you may find the Bucharest situation as distressing as I do and may be willing to give some relief. Possibly the Milwaukee Art Museum might also be interested in a Romanian icon exhibition ?!
Please excuse me for bothering you with this case.

Sincerely yours,



Prof. Dr. J.C.J. Bart

Enclosures: 2





ALFRED BADER FINE ARTS

DR. ALFRED BADER

ESTABLISHED 1961

October 28, 1994

Mrs. Saskia Jungeling
Noordeinde 159
2514 GG 's Gravenhage
The Netherlands

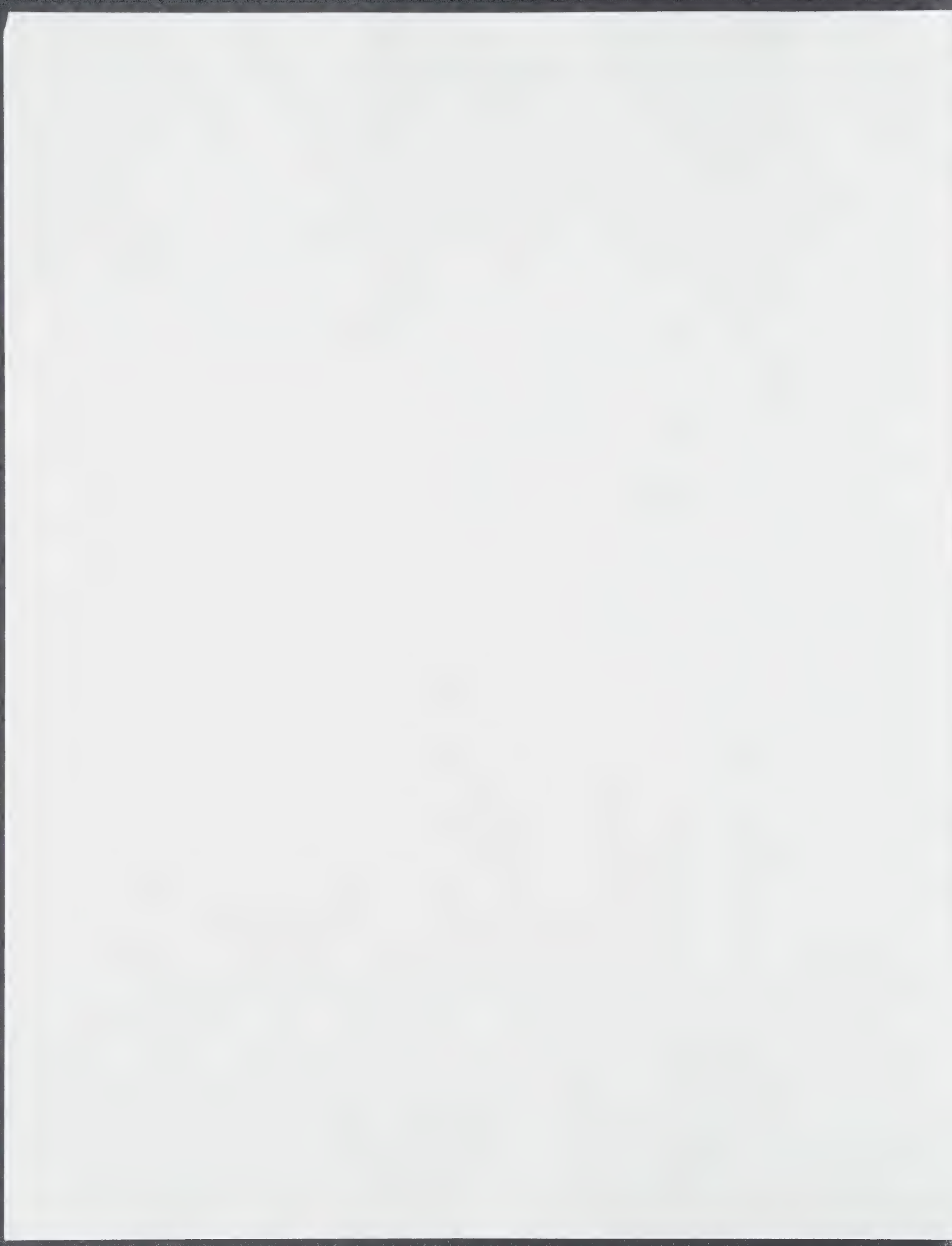
Dear Saskia,

Isabel and I look forward to being in Holland from the 12th to the 18th of November, plan to meet our friend Bert van Deun, and if convenient, visit you at your gallery on Tuesday the 15th.

Best wishes.

As always,

By Appointment Only
ASTOR HOTEL SUITE 622
924 EAST JUNEAU AVENUE
MILWAUKEE WISCONSIN USA 53202
TEL 414 277-0730 FAX 414 277-0709



Mr. A. Bader
P.O. Box 355
Milwaukee, Wisconsin
53201 USA

Delft, March 20th 1992

Dear Mr. Bader,

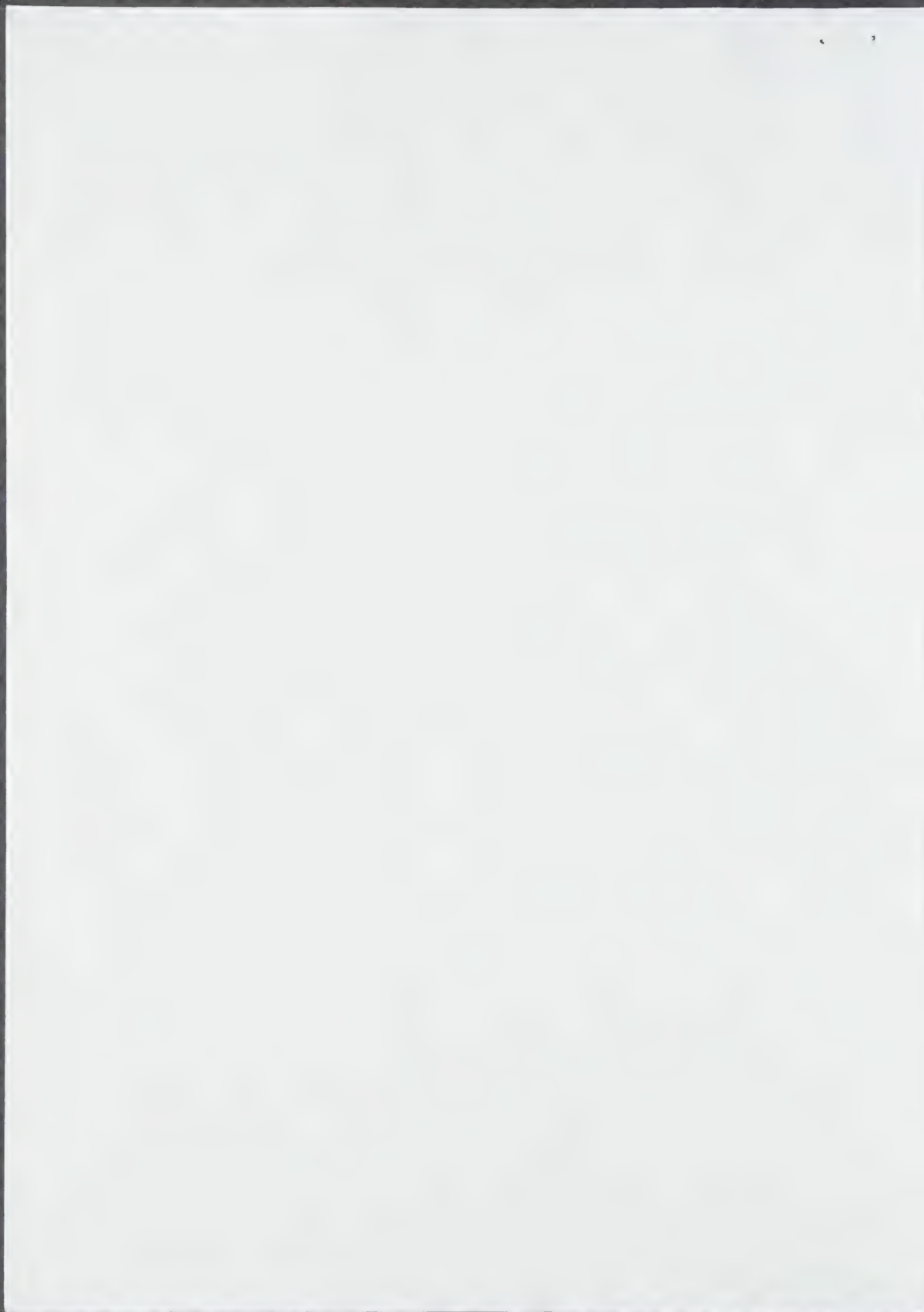
Unfortunately there has been a misunderstanding. I thought you were visiting the Netherlands anyhow and we could organise some lectures for you. Unfortunately our organisation does not have the money available to invite foreign lecturers to visit our country on our cost for such an occasion.

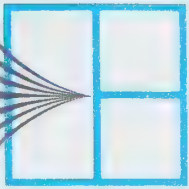
Of course we hope you will visit the Netherlands anyhow. In that case I am prepared to act as a coordinator for the organisation of your lectures throughout the country. About 6 lectures can be arranged for you without any problems.

Please consider the above and let us know your decision.

Kind regards,


Marja Agema
J.C. van Markenplein 9-1
2613 AE DELFT
telephone: 071-455723
fax 071-455840





Center for Bio-Pharmaceutical Sciences

Gorlaeus Laboratories
P.O. Box 9502, 2300 RA Leiden,
The Netherlands

Divisions of
Analytical Chemistry
Biopharmaceutics
Medicinal Chemistry
Pharmaceutical Technology
Pharmacognosy
Pharmacology
Toxicology

Dr. A. Bader
Sigma-Aldrich
P.O. Box 355
Milwaukee, Wisconsin 53201
USA

Telephone: 071-274651
Telefax: 071-274537

Ref:AIJ/656/DP

Date: 15 juli 1992

Dear Dr. Bader,

Enclosed is a recent report in the Dutch 'NRC Handelsblad' describing the 8 July auction at Sotheby's in London. The reporter unambiguously compliments you with your choice!

Since we discussed fine arts during your stay in the Gorlaeus laboratories in Leiden on November 28, I thought you might be interested.

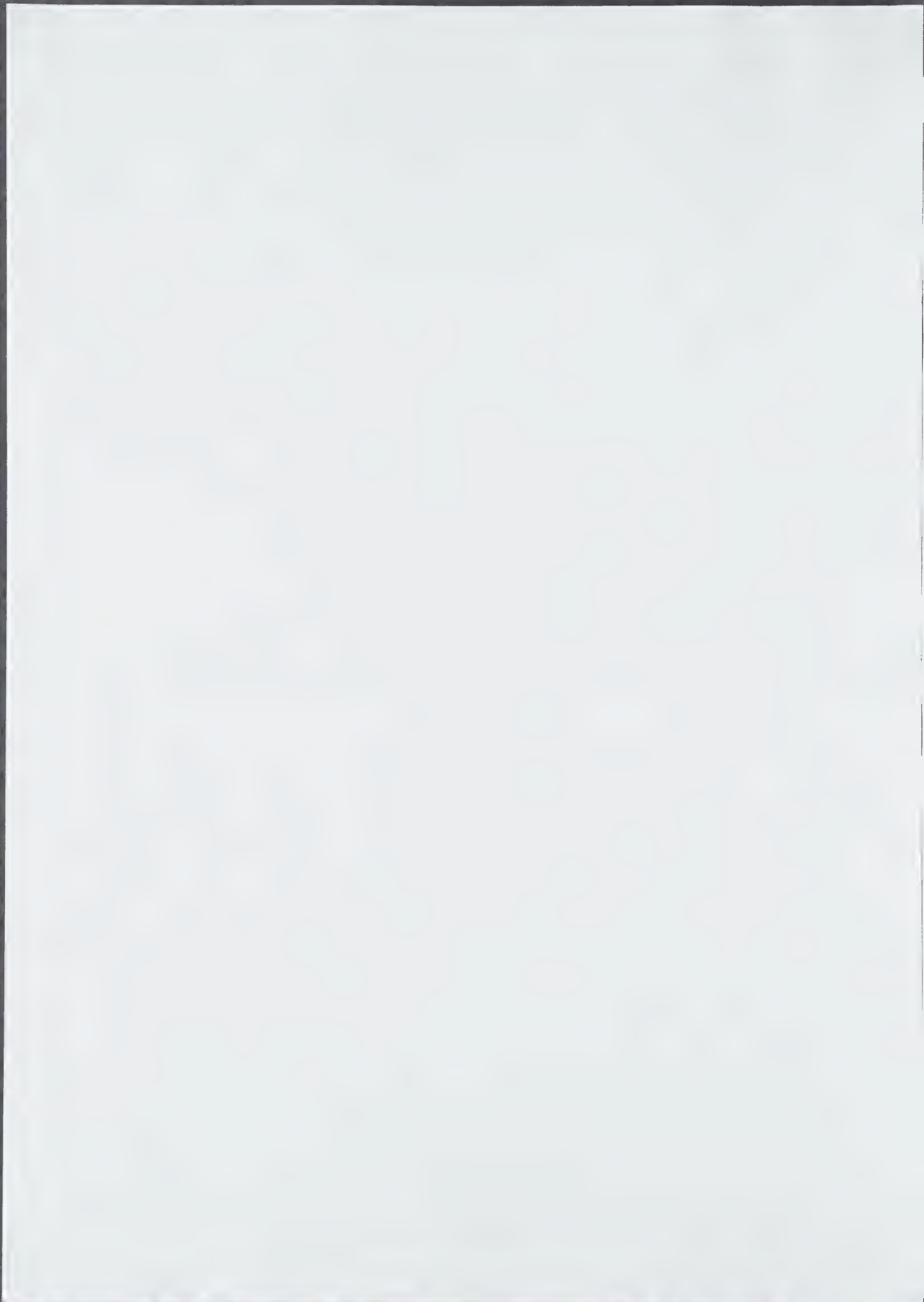
Best regards,



Dr. A.P. IJzerman



Leiden University



Dr. Alfred Bader
2961 North Shepard Avenue
Milwaukee, Wisconsin 53211

July 27, 1994

Dr. Egbert van Wezenbeek
Publishing Editor
Elsevier Science
P.O. Box 330
1000 KV Amsterdam
The Netherlands

Re: Moulijn - "Technology and Fine Chemicals Manufacture"

Dear Dr. Wezenbeek:

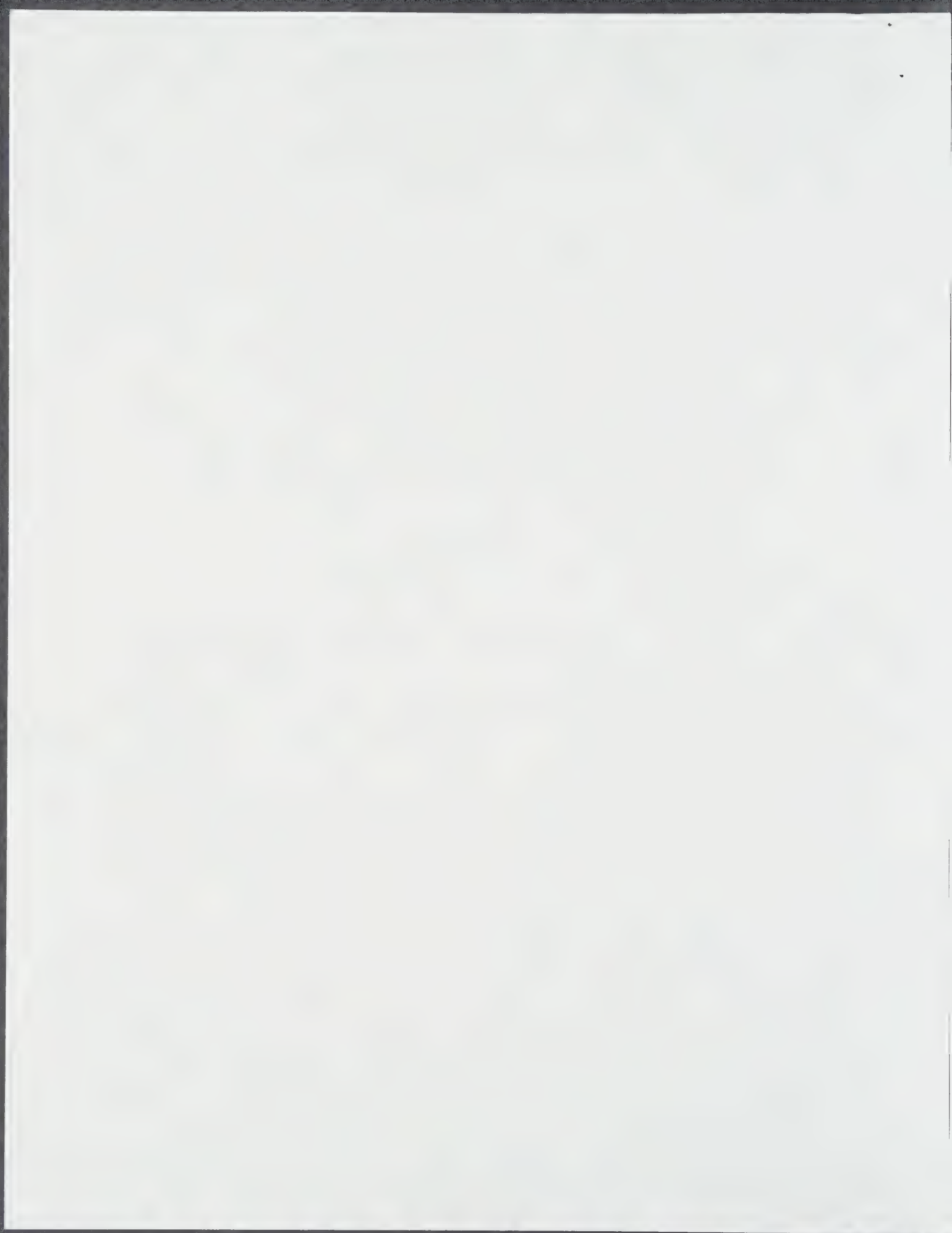
Thank you for your letter of June 24th, asking my opinion about the above book.

I am not competent to judge the merits of this work, but I would suggest that you contact Dr. Clinton Lane, Executive Vice President of Aldrich Chemical Co., Inc., P.O. Box 355, Milwaukee, WI 53201, U.S.A.

Dr. Lane has been intimately involved with a great deal of production at Aldrich, and he will, I believe, be able to advise you.

All good wishes.

Sincerely,





ELSEVIER
SCIENCE

Dr. Alfred Bader,
2961 North Shepard Avenue,
Milwaukee,
Wisconsin 53211,
U.S.A.

Tel.: +31 20 5862475
Fax.: +31 20 5862845
E-mail: e.wezenbeek@elsevier.nl

EvW/ll

June 24, 1994

Chemistry & Chemical
Engineering Department

Sara Burgerhartstraat 25
1055 KV Amsterdam
The Netherlands

P.O. Box 330
1000 AH Amsterdam
The Netherlands

Tel (+31) 20 5862 911
Publishing
Fax (+31) 20 5862 845
Editorial
Fax (+31) 20 5862 459

Dear Dr. Bader,

Re: Moulijn - "Technology and Fine Chemicals Manufacture"

We have recently received the above book proposal and, as the scope of this work fits into your research interests I should like to ask your opinion on the proposal in order that we can reach a publishing decision. A copy of the material is included.

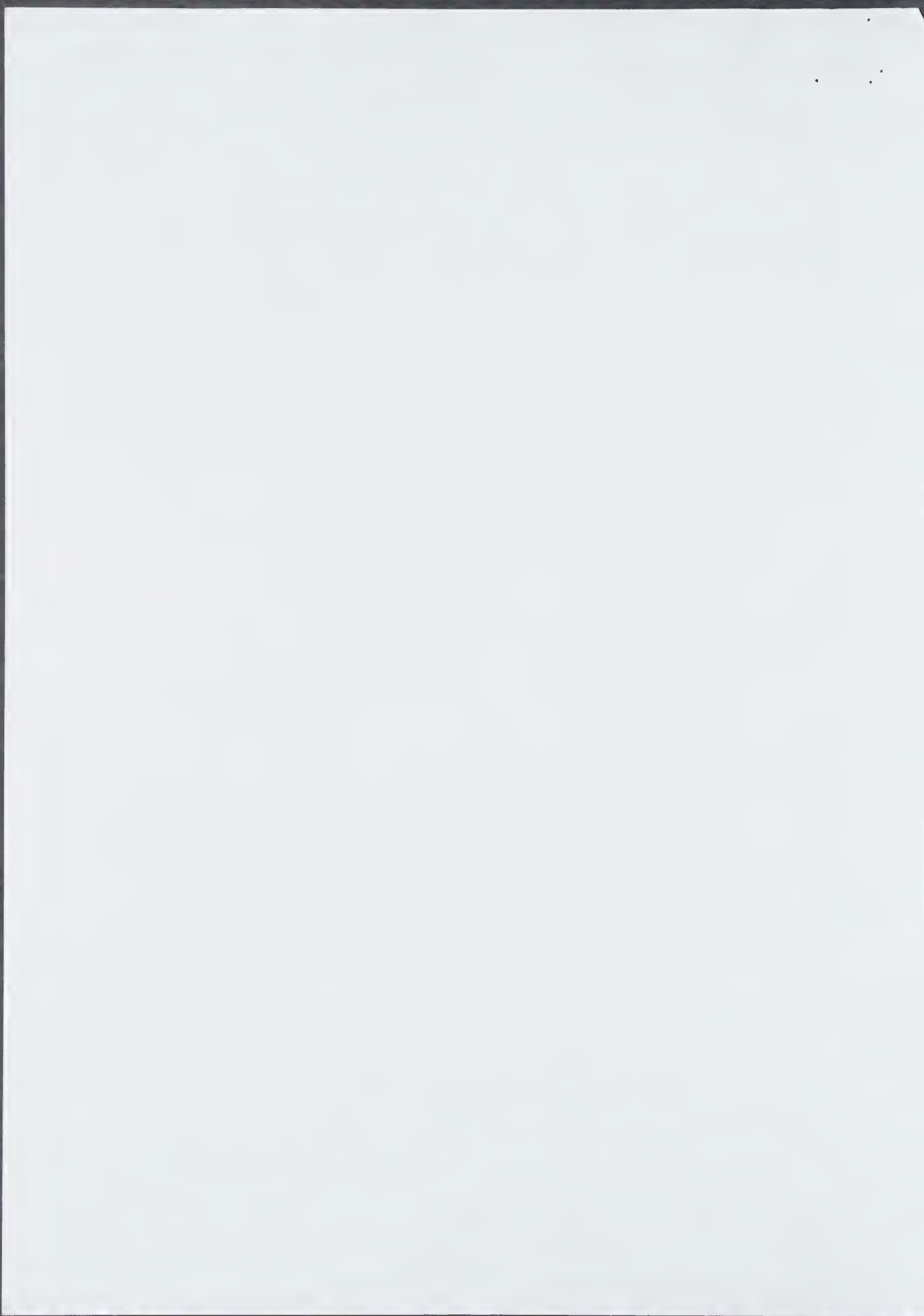
I am particularly interested in the following:

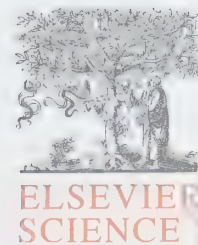
- Is the subject, as outlined, a useful addition to the scientific literature?
- Are you aware of any other books either recently published or in preparation which would compete with this publication?
- Are important aspects lacking or unimportant aspects given too much emphasis?
- Could the proposed structure be improved upon?
- For which audience would this book be suited?
- Your estimate of the market for this book.
- Would you buy this book or recommend its purchase by your library?

Any other comments you may have on this project are welcome. They will of course be treated confidentially and only discussed with the author on an anonymous basis.

Imprints:
Elsevier
Pergamon
North-Holland
Excerpta Medica

Bankers: Hollandsche Bank-Unie
Rotterdam 62.30.60.493
HR Amsterdam 158992





-2-

For this service, we shall be pleased to offer you a book from our chemistry catalogue to the value of Dfl. 400.00, providing that the comments reflect more than just a cursory judgement of the synopsis. Should you for any reason be unable to review this proposal, please let me know at your earliest convenience. In this case the name and address of an alternative reviewer would be much appreciated.

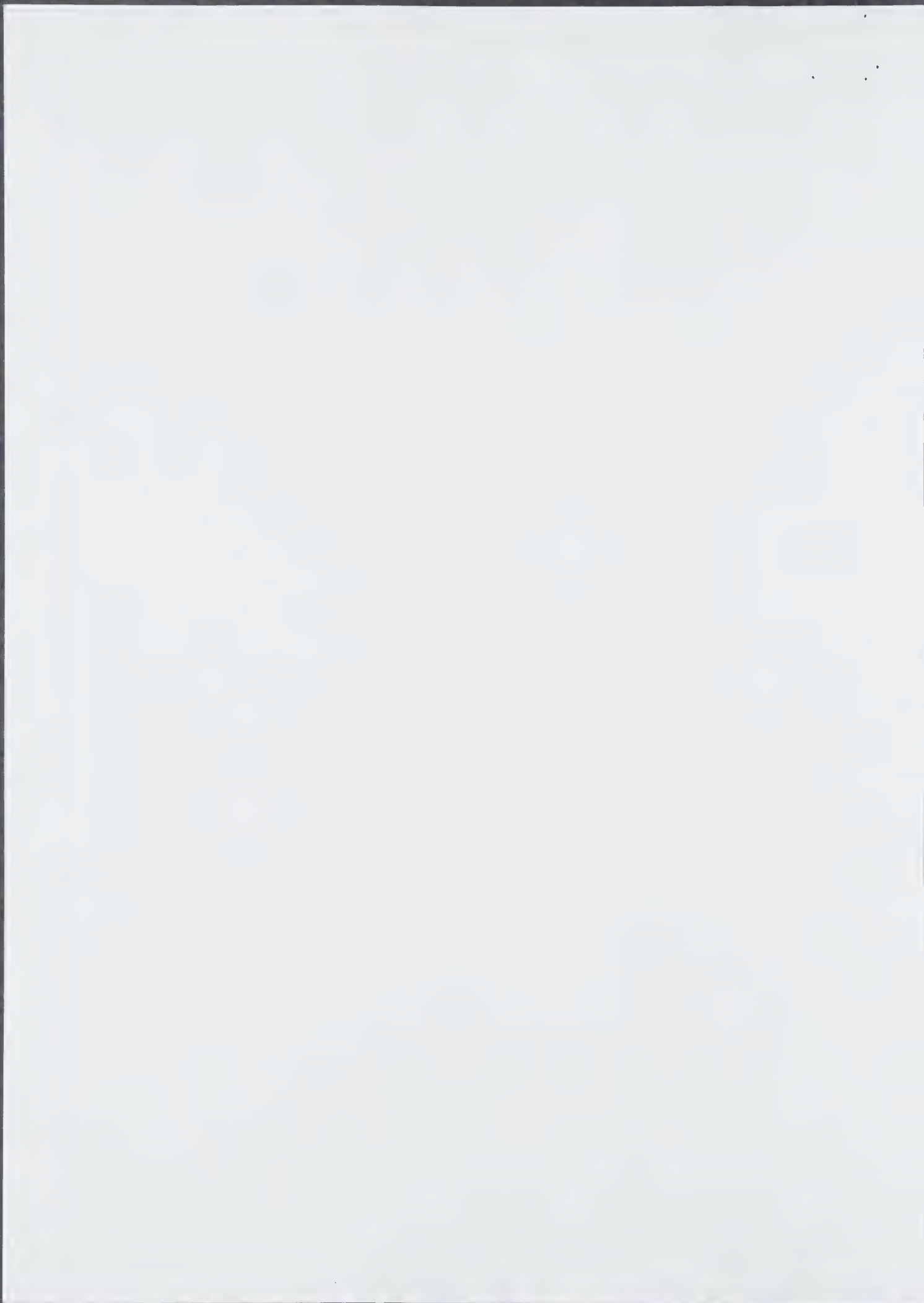
I look forward to hearing from you in due course.

Yours sincerely,
ELSEVIER SCIENCE B.V.



Dr. Egbert van Wezenbeek
Publishing Editor

Enclosure



TU Delft

1992



Elsevier Science B.V.
Attn. Dr. E. van Wezenbeek
P.O. Box 330
1000 AH Amsterdam

and Materials
Delft University of Technology
FAX 3115 784452
P.O. Box 5045
2600 GA Delft, The Netherlands
Julianalaan 136
2628 BL Delft, The Netherlands
University switch board:
(015) 78 91 11
Telex 38151 butud nl

Your reference and date

Our reference
AC/36/94

Office telephone
(015) 785008

Date
18.05.94

Subject

Technology and fine...

Sub-division

Department of Chemical Engineering

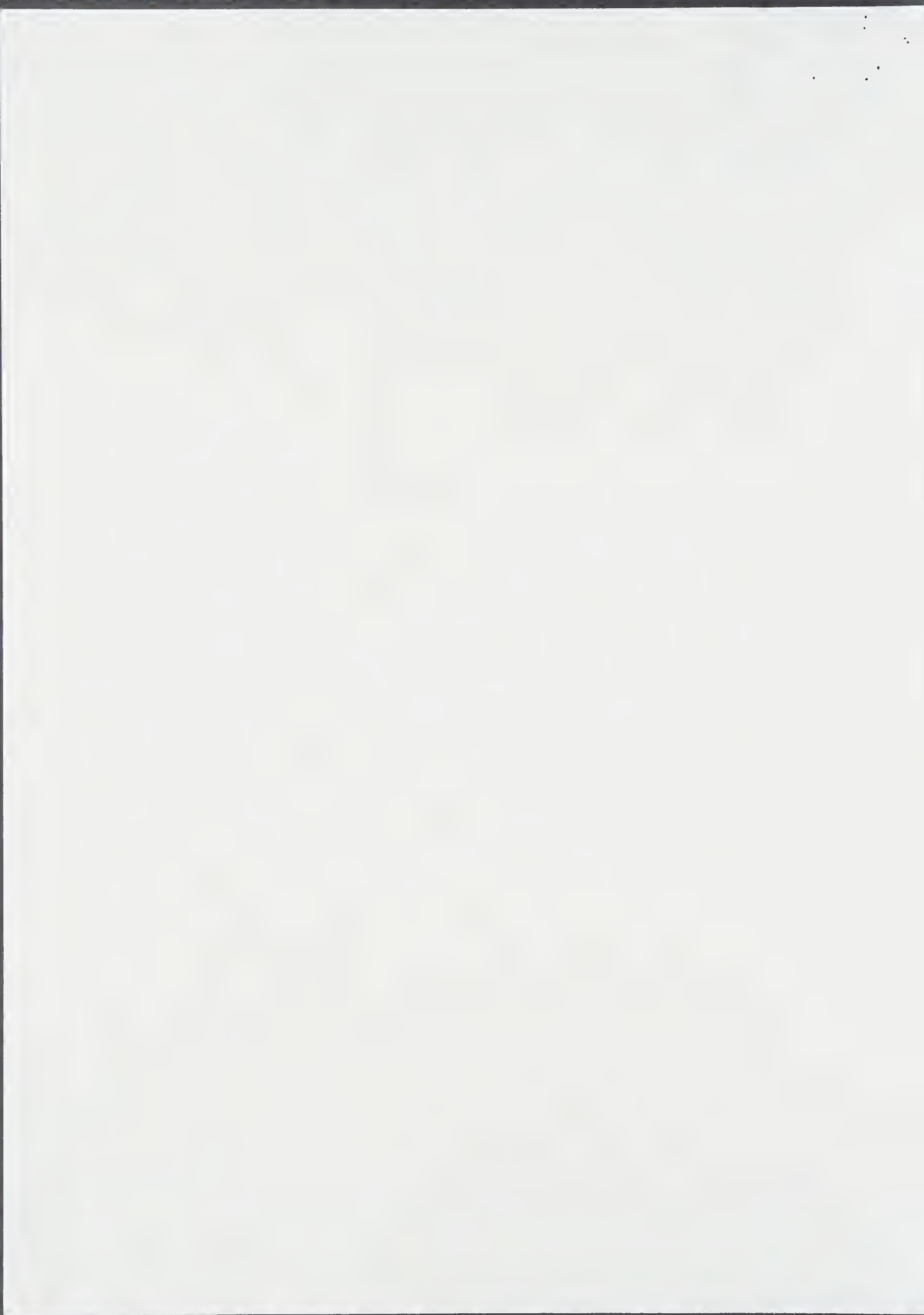
Dear dr Van Wezenbeek

Following our former discussions I am sending you the proposal of writing a book on **TECHNOLOGY AND FINE CHEMICAL MANUFACTURE**. You will find attached the contents of the book.

We plan to present the present status and prospects in these topics which we consider the most important for development of new processes and optimization of existing plants for manufacture of fine chemicals. *Maximizing of selectivities, safe and optimal scaling-up of chemical reactors, environmental aspects in process development and optimization, and problems of designing and scheduling of multiproduct (multipurpose) plants* characteristic for manufacture of fine chemicals have been chosen as these topics. A special attention is paid to catalysis as the means to improve selectivities and decrease emissions to the surrounding.

The book is also thought to form a link between chemists and engineers involved in R&D, designing and production planning in fine chemistry business. There is now a gap between laboratory chemists, engineers involved in R&D and production engineers. We plan to fill the gap with respect to the above listed topics and to contribute to the mutual understanding between these specialists of different background and experience.

The authors are experienced in all fields specified above. Dr. Andrzej Cybulski is an Associate Professor in the Department of Chemical Engineering of Delft and he is responsible for research in the field of chemical reaction engineering and fine chemicals. Before he has joined the Department he was head of the Department of Chemical and Process Engineering in the Research Institute of Pharmaceutical Industry, Warsaw, Poland. Dr. Jacob A. Moulijn is a professor and chairman of the Department of Chemical Engineering of Delft and also head of the Group of Industrial Catalysis. He is an author of many books on catalysis and a consultant of many chemical companies. Dr. Roger A. Sheldon is a professor in the Department of Catalysis and Organic Chemistry of Delft. Formerly he was with Shell working on speciality

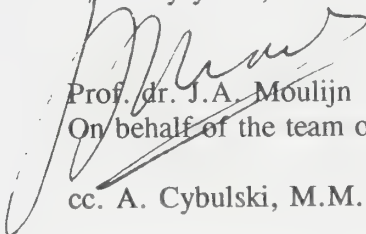


chemicals and with Andeno (a company producing fine chemicals) as the Director of R&D. He is an author of many books on fine chemicals and catalysis in organic chemistry. Dr. Man M. Sharma is a professor and director of the Department of Chemical Engineering of Bombay, India, formerly a professor in Cambridge, UK. He is an author of many books in the field of chemical reaction engineering and the world recognized specialist in the field of engineering for fine chemicals. All the authors have published hundreds papers on catalysis, fine chemicals and chemical reaction engineering.

More information, e.g., a more extended summary of the book or already advanced chapters, can be delivered on request.

Looking forward to hearing from you,

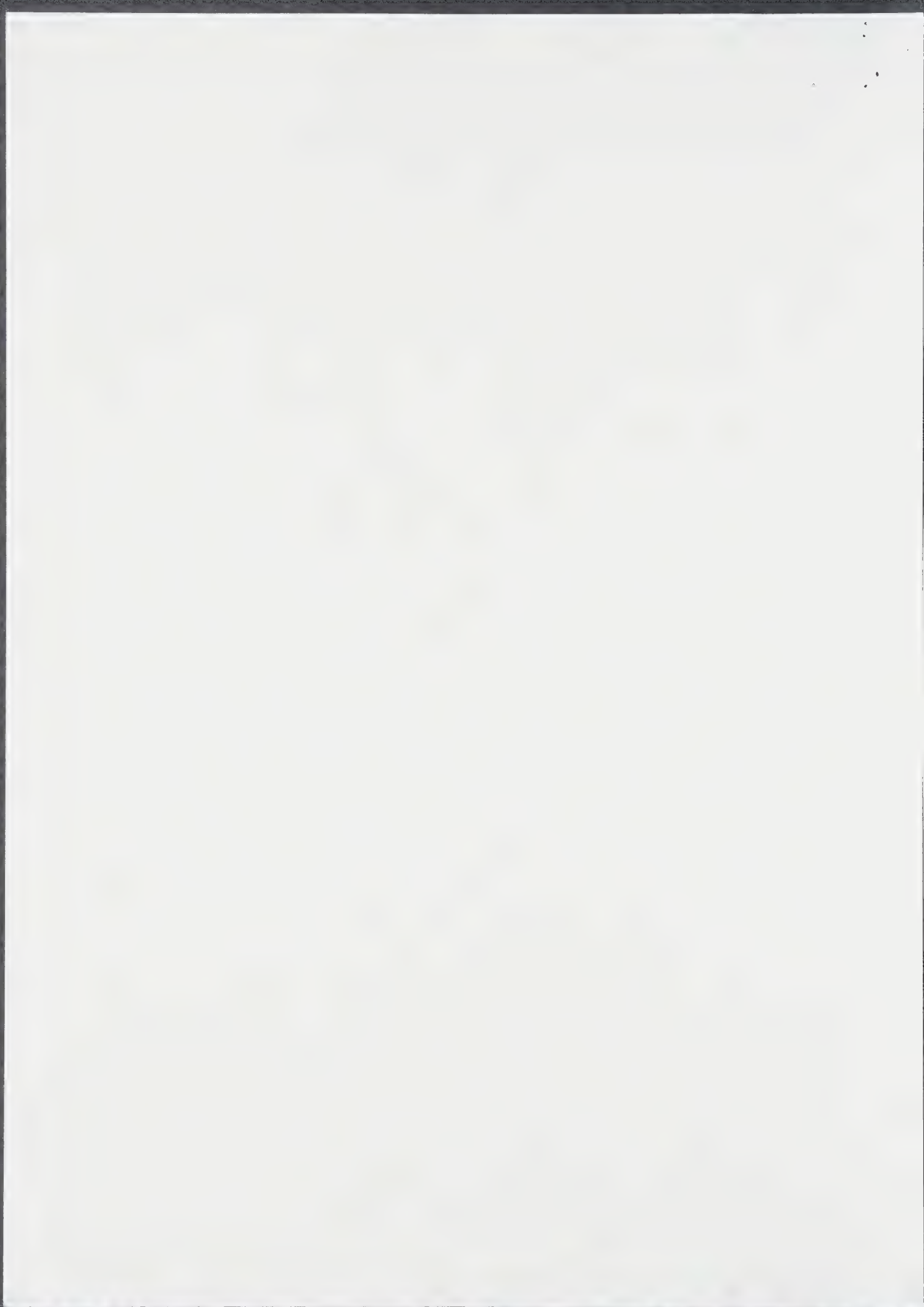
Sincerely yours,



Prof. dr. J.A. Moulijn
On behalf of the team of the authors.

cc. A. Cybulski, M.M. Sharma and R.A. Sheldon

Enclosed: Contents of the book: **TECHNOLOGY AND FINE CHEMICAL MANUFACTURE**



Title:

TECHNOLOGY AND FINE CHEMICALS MANUFACTURE

Potential readers: chemists and chemical engineers active in fine chemistry (R&D, designing and production)

Authors:

A. Cybulski, J.A. Moulijn, M.M. Sharma, R.A. Sheldon

Contents

1. Introduction

Why to write a book on the subject? The main objective is to establish a good basis for the mutual understanding of chemists and engineers involved in R&D, designing and production planning in fine chemistry business.

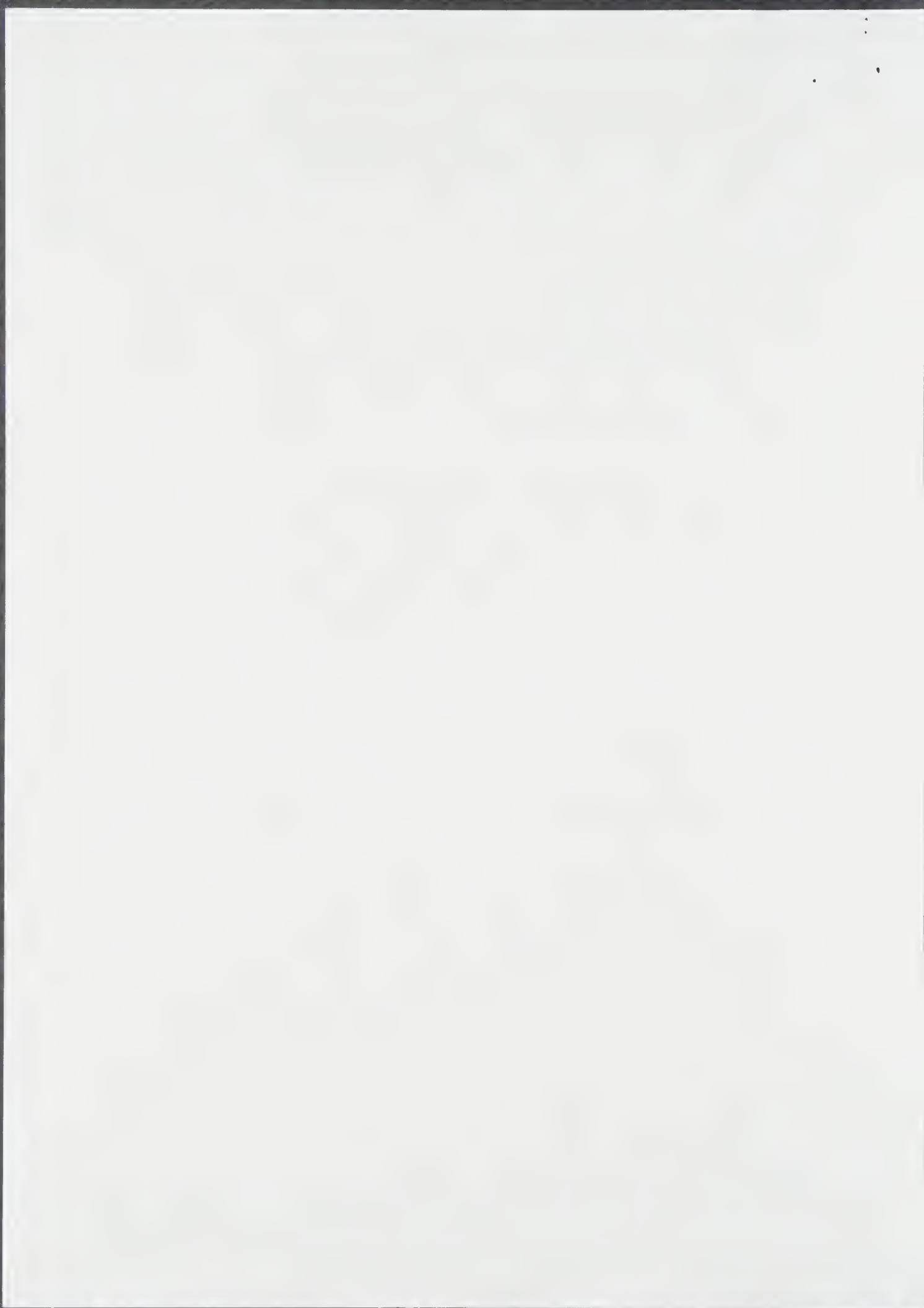
Brief description of the present practice in scale-up, development and production planning will be given and the most promising trends and achievements will be presented.

Definition of the scope of the book:

what is fine chemistry?
catalysis as a mean to increase profitability and reduce the E-factor,
selectivity engineering,
process development with particular attention given to reactions/reactors as the most important part of the plant, and to safety problems,
general description of plants for manufacture of fine chemicals,
discussion of specific features of multiproduct plants (at both design and operation stages) which are the most characteristic for production of fine chemicals; dedicated and/or continuous plants, which are typical for manufacture of bulk products will not be discussed in more detail.

2. What is fine chemistry?

- 2.1. Characteristics of fine chemicals and historical development
- 2.2. Fine chemicals vs bulk chemicals manufacture
- 2.3. Factors influencing choice of technology and process economics
- 2.4. Process profile analysis - a method for comparing alternative technologies in an early stage of development
- 2.5. The role of catalysis in waste minimization in the fine chemicals industry
- 2.6. Future trends in fine chemicals manufacture

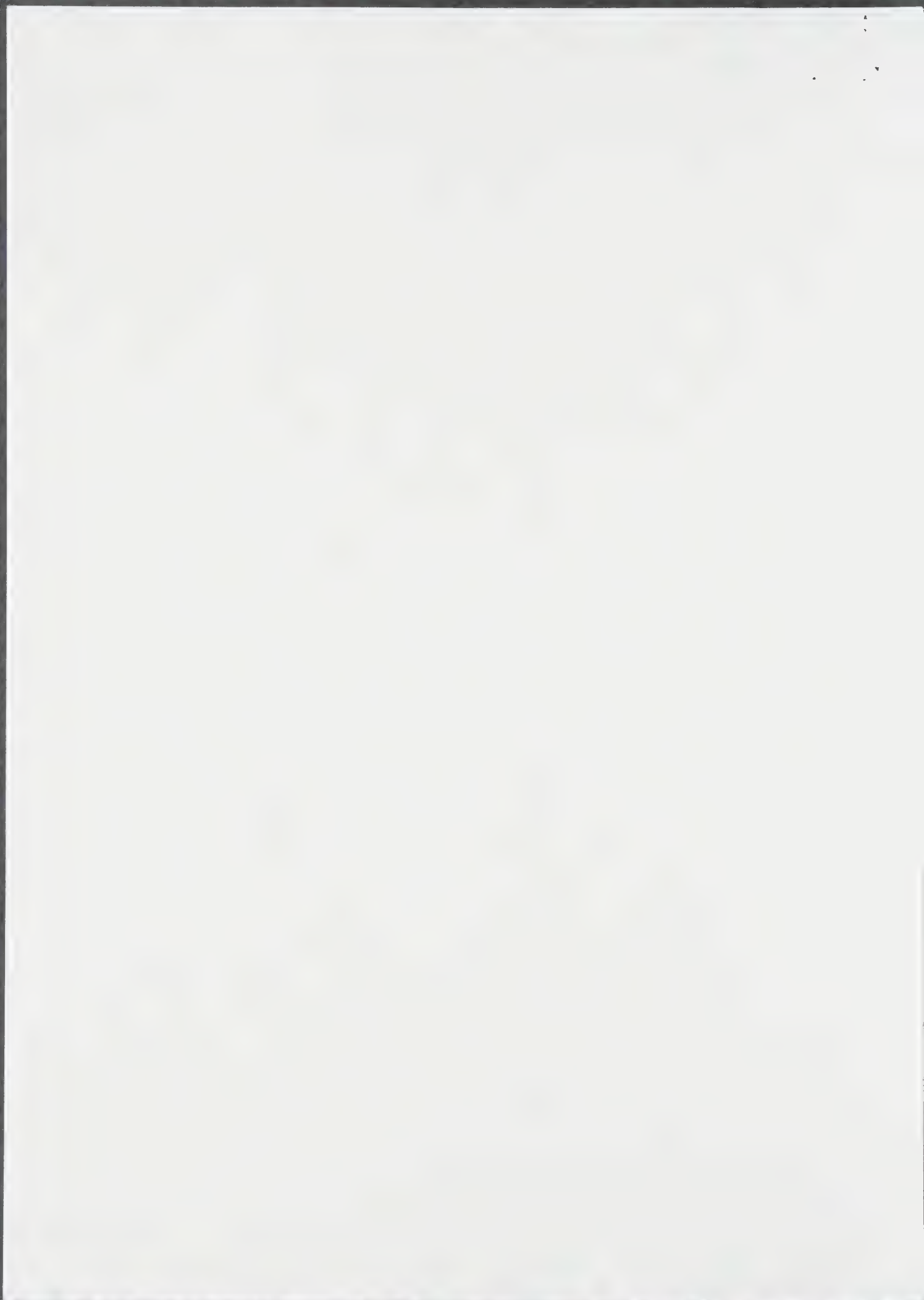


3. Catalysis in fine chemicals

- 3.1. Basics of catalysis
 - 3.1.1. How does a catalyst work?
 - 3.1.2. Elementary steps: coordination (adsorption), dissociation (desorption) insertions, oxidative addition, reductive elimination etc
- 3.2. Types of catalysts
 - 3.2.1. Chemocatalysts, Homogeneous, Heterogeneous, Chiral
 - 3.2.2. Examples: Ra-Ni, Pd/C, zeolites, etc
 - 3.2.3. Biocatalysts
 - 3.2.4. Examples: proteases (thermolysin), lipases, benzene to dihydrocatechol, etc.
- 3.3. Practical aspects
 - 3.3.1. Heterogeneous catalysis: porosity, texture, particle shape, mechanical strength, mass transfer (internal, external mass transfer)
 - 3.3.2. Homogeneous catalysis : ligands, catalyst recovery
 - 3.3.3. Biocatalysis
- 3.4. Practical examples
 - 3.4.1. Vitamins A and E
 - 3.4.2. Ibuprofen
 - 3.4.3. Indigo
 - 3.4.4. Aspartame
 - 3.4.5. /b-APA
 - 3.4.6. Paracetamol
 - 3.4.7. Synthetic pyrethroids
 - 3.4.8. L-dopa
 - 3.4.9. Oxidation of p-cresol to p-hydroxybenzaldehyde

4. Selectivity engineering

- 4.1. Additional liquid phase
 - 4.1.1. Extractive reactions
 - 4.1.2. Phase transfer catalysis
- 4.2. Rate and selectivity improvement via manipulation of "microenvironment"
 - 4.2.1. Micelles
 - 4.2.2. Microemulsions
 - 4.2.3. Hydrotropes
 - 4.2.4. Micromixing
- 4.3. Rate and selectivity improvement via manipulation of "macroenvironment"
 - 4.3.1. Zeolites
 - 4.3.2. Molecular engineered layer structures
 - 4.3.3. Cyclodextrins
- 4.4. Unconventional techniques
 - 4.4.1. Photochemical reactions
 - 4.4.2. Biocatalysis
 - 4.4.3. Ultrasonochemistry
 - 4.4.4. Electrochemical processes
 - 4.4.5. Solid-supported reagents
 - 4.4.6. Membrane reactors
- 4.5. Continuous processes

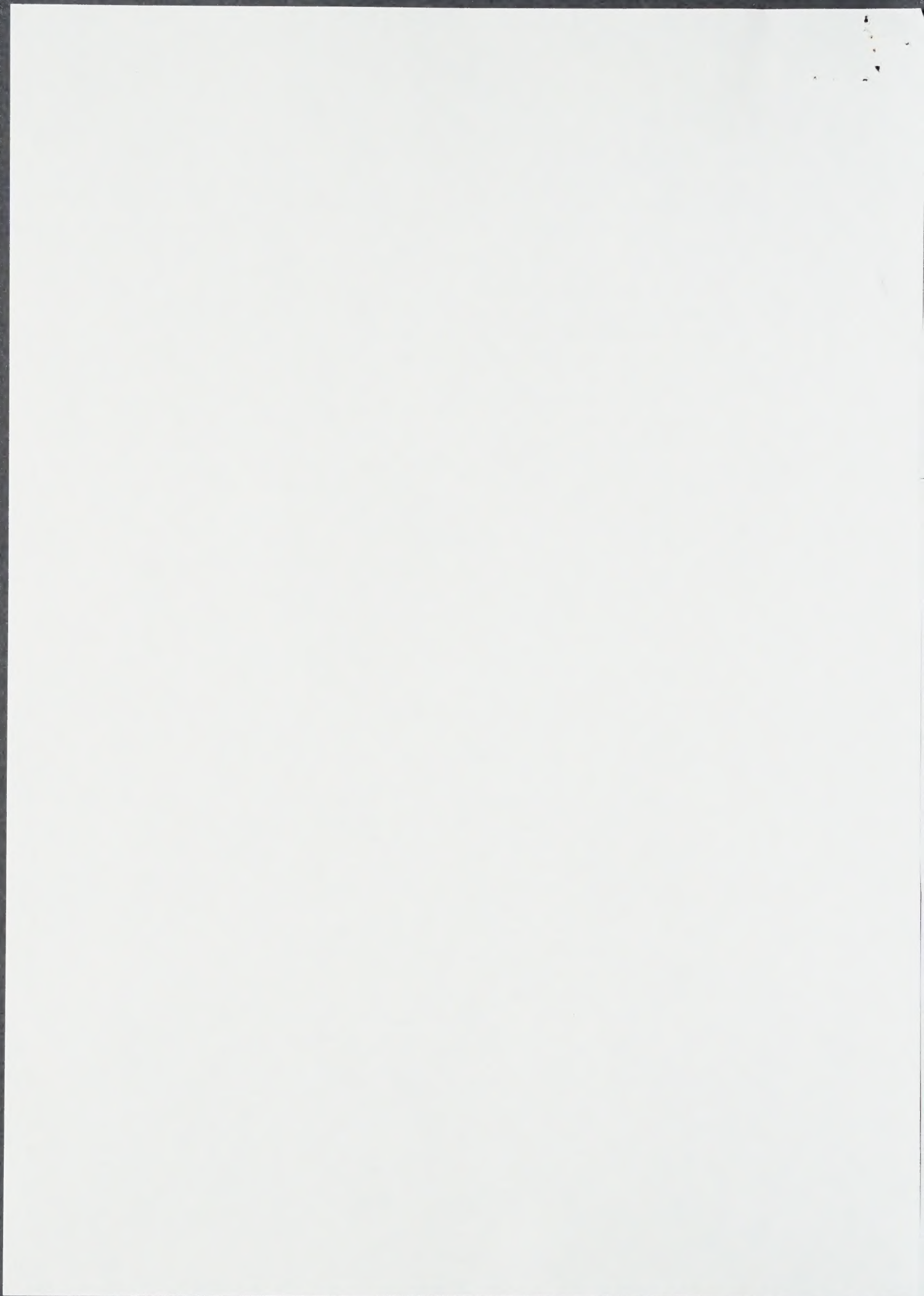


5. Process development

- 5.1. General aspects
- 5.2. Choice of chemical route
- 5.3. Scaling-up procedures
 - 5.3.1. Scaleup effects
 - 5.3.2. Scaleup ratio
 - 5.3.3. Scaleup strategies
 - 5.3.4. Modelling techniques
- 5.4. Elements of chemical reactor design and operation
 - 5.4.1. Basic kinetics and thermodynamics
 - 5.4.2. Analysis of rate data: isothermal experiments; thermal methods; tendency modelling
 - 5.4.3. Homogeneous reactions
 - 5.4.4. Multiphase processes
 - 5.4.5. Influence of mixing on yield and selectivity
 - 5.4.6. Optimization of yield and selectivity
- 5.5. Safe scaling-up of chemical reactors
 - 5.5.1. Safety in process development. Safety strategies
 - 5.5.2. Thermal instability. Temperature runaway theories
 - 5.5.3. Experimental techniques for thermal hazard evaluation
 - 5.5.4. Safety rules and empirical criteria for safe operation. Guidelines on the selection of a reactor type and process conditions

6. Production plants

- 6.1. Types of production plants
 - 6.1.1. Dedicated plants
 - 6.1.2. Multiproduct and multipurpose plants (MPP's)
 - 6.1.3. Mixed plants
- 6.2. Typical equipment of MPP's. Discretization of sizes
- 6.3. Cost of equipment
- 6.4. Designing and scheduling of multiproduct and multipurpose plants
 - 6.4.1. Characteristics of batch processing. Basic definitions
 - 6.4.2. Designing of batch plants
 - 6.4.2.1. Single product plants
 - 6.4.2.2. Multiproduct plants
 - 6.4.2.3. Multipurpose plants
 - 6.4.2.4. Choice of intermediate storage capacity
 - 6.4.2.5. Addition and replacement of equipment items
 - 6.4.2.6. Strategies for process control
 - 6.4.3. Production planning and operation scheduling
 - 6.4.4. Techniques for solving the problems of designing and scheduling
 - 6.4.5. Commercial, industrial and academic scheduling systems for analysis of multiproduct plants
 - 6.4.6. Designing and scheduling under uncertainty





Dr S. Segal
Prinsengracht 851
1017 KB Amsterdam
Tel. (020) 23 87 48
new tel.no. 623.8748!
new fax no. 624.3845!

3/3

Mr. and Mrs. Alfred R. and
Isabella Bader
52 Wickham Avenue
Bexhill-on-Sea
East Sussex TN 39 3ER
England

19-9-1994

Dear Mr. and Mrs. Bader,

It was a pleasure to meet you in my home and I thank you for sending the catalogue. Please do call in next time you are in Holland. It was a very busy time afterwards for me, preparing university lectures. There were important happenings for you meantime: the beautiful! Rembrandt.

I remember that we spoke about the large Willem Kalf painting in my home, the original from the well-known work in the Wallraf-Richartz-Museum in Cologne, which is reproduced in many books but is an eighteenth century copy, in fact. Would you be interested to buy that painting? The owner told me that he will definitively sell.

Yours sincerely,

San Segal

Otto:

*A good painting, but not
my ideal Kalf.*

What do you think?

10/19

Gerda

Handwritten text, likely bleed-through from the reverse side of the page. The text is extremely faint and illegible.