

60 Years Prof. Dr. Christian Wandrey

CURRICULUM VITAE

Personal

12.04.1943
born in Plauen/Germany married, three children

Education

1962
School-leaving examination (Abitur)
1962–1964
Military service in the German Army
1964–1970
Education in chemical engineering at the University of Hannover/Germany and the University of Bristol/Great Britain
1970
Diplom-Chemiker (Master of Science)
1973
PhD in chemical engineering of the University of Hannover/Germany

Professional Experience

1976
Assistant Professor at the University of Hannover/Germany
1977
Habilitation, *venia legendi Privat-Dozent* (Lecturer) for Chemical Engineering
1977
Associated Professor for Chemical Engineering at University Clausthal Zeller Yield/Germany
1979
Full Professor for Biotechnology at the University of Bonn/Germany and Director at the Institute of Biotechnology at the Research Center, Jülich/Germany

Teaching Activities (Germany)

- chemical reaction engineering
- analogue computing
- mathematical exercises in chemical engineering
- optimization in chemical engineering
- chemical thermodynamics for process engineers
- plant design and economics
- experimental course on biochemical engineering
- supervisor of more than 70 PhD thesis

Other Teaching Activities

Visiting professor, The Institute for Physical and Chemical Research (RIKEN), Wako-Shi/Saitama, Japan, February/March 1983

Recent Research Activities

Enzyme technology:
application of enzymes for biotransformations, kinetic characterization, membrane reactors

Fermentation technology:
enzyme production, amino acid fermentation, development of fermentation equipment

Cell culture technology:
fluidized bed reactors, flow injection analysis of metabolites, closed loop control of continuous fermentations, medical biotechnology

Bioorganic chemistry:
combination of enzyme-catalyzed classical chemistry steps

Industrial Experience

1977 – today
Development of the Enzyme-Membrane-Reactor (in cooperation with Degussa AG, Hanau; (production of L-amino acids)

1987 – today
Biogas high performance process (7 industrial plants installed)

1995 – today
Co-Initiator of 4 start-up companies: DSM Biotech GmbH,

Jülich; Paspasyrou biotechnologie GmbH, Jülich; Jülich Fine Chemicals, Jülich; AC Biotec GmbH, Jülich

Consulting

Several consulting assignments to industry in the area of biochemical engineering and process economics: Degussa AG, Hanau/D; DSM Research, Geleen/NL; Novartis, Basel/CH
Member of the Board of Directors: Company ScheBo®. Biotech AG, Giessen
Member of the Board of Directors: Company Dahlem Biomed AG

Scholarship and Awards

1965–1970
Undergraduate scholarship of Konrad-Adenauer-Stiftung, Bonn



1967

Karmarsch-Stipendium of the City of Hannover

1971–1973

Graduate scholarship of Konrad-Adenauer-Stiftung, Bonn

1973

Christian-Kuhleemann-Stipendium of the University of Hannover for the best PhD thesis in natural science

1983

Technology-Transfer Prize of the Minister for Research and Technology of the Federal Republic of Germany

1987

Philip-Morris-Award for the Development of a Biogas High Performance Process for Treatment of Highly Polluted Waste Waters

1995

Enzyme Engineering Award of the Engineering Foundation, New York

1999

Carl-Friedrich-Gauß Award of the Braunschweigische Wissenschaftliche Gesellschaft

2002

Wöhler Award of the GDCh, Gesellschaft Deutscher Chemiker

Publications, Patents and Presentations

- About 300 scientific publications
- About 80 patents and patent applications
- About 400 presentations
- Editor of three books
- Editorial Boards:

Chemie Ingenieur Technik (CIT), Wiley-VCH Verlag, Weinheim

Advances in Biochemical Engineering, Springer Verlag, Heidelberg

Journal of Molecular Catalysis B: Enzymatic, Elsevier Science, Amsterdam

Journal "Biocatalysis and Biotransformation" (BCBT), Harward Academic Publishers, Reading, GB

Journal "The Chemical Record", John Wiley & Sons, Inc., Tokyo, Japan

Professional memberships

Working party on biochemical engineering of the Gesellschaft Verfahrenstechnik und Chemieingenieurwesen, Germany

Working party on Biotechnology of DECHEMA, Germany

Working party on Catalysis of DECHEMA, Germany

Corresponding member in the division of mathematics and natural science of the Braunschweigische Wissenschaftlichen Gesellschaft

Corresponding member in the division of technical science of the Sächsische Akademie der Wissenschaften zu Leipzig

Corresponding member of the Schweizerische Akademie der Technischen Wissenschaften (SATW)

It is my pleasure to have this opportunity to extend my heartfelt congratulations to Professor Christian Wandrey on his 60th birthday.

It is hard to believe that I know him and have worked with him for 18 years. I met him in August 1985 when I came for the first time as a guest researcher in the Institute of Biotechnology 2 at Research Centre (Forschungszentrum) Jülich (in that time Kernforschungsanlage Jülich) in Germany. His major research interests by this time were mainly in the field of enzymes as a biocatalyst. I finished my PhD in this field and was just appointed as Assistant professor at the Faculty of Chemical Engineering, University of Zagreb.

In addition to the yield of enzyme catalysis Professor Wandrey is well known for his contribution to other fields such as Enzyme Technology, Fermentation Technology, Cell Culture Technology as well as Bioorganic Chemistry. As well as studying his topics, Professor Christian Wandrey intensely promotes his research by publishing the achievements at various scientific meeting, and in numerous reviews. He gave many invited talks, lectures and presentations. He is a consultant of several firms. Professor Wandrey initiated to set up four new biotech companies. The goal of these enterprises is to create various bio products. His philosophy is a recirculation process: money → invention (science) → innovation (manufacturing) → money.

Over the years his institute hosted many postdoctoral and professorial visitors and he was advisor of more than 70 doctoral and postdoctoral students.

He has received numerous prizes and been awarded in recognition of these achievements.

I would like to say that it is Professor Wandrey who introduced me into the international Applied Biocatalysis community. I cannot ever forget his deep feeling for the Croatian people. Even though it was for a very short stay each time Professor Wandrey visited Croatia for three times on his cost always giving lecture. He has been open to all suggestions and considering other people as partners. This resulted in a common organization of the International symposium on "Enzyme reaction engineering" in 1997 in Croatia, under auspices of the working party on "Applied Biocatalysis" of the European Federation on Biotechnology. He always encourages my research supplying us with chemicals, laboratory materials, donating apparatus and computers, and provides funds and grants for the stay of my students and me in his Institute over those years. More than a dozen students at the Faculty of Chemical Engineering and Technology, Zagreb have benefited from this.

We have published seven papers together. Also, in 2000 the book "Industrial biotransformations", which was written by eight authors appeared. Professor Wandrey as one of editors gave me the opportunity to write the chapter "History of industrial biotransformations – Dreams and realities". He is above all, a very understanding and reasonable person.

I learned from him how to dedicate myself to Biochemical Engineering and to be involved with it. As a Full Professor at the University of Zagreb I can pass that spirit on to my students.

I know that Professor Wandrey likes travelling around the globe and more and more sailing on sea.

I thoroughly have enjoyed and continue to enjoy working with Professor Wandrey on Biochemical Engineering-especially on enzyme reaction engineering and I hope our co-operation will last for many more years to come. I wish him to stay as passionate and enthusiastic for science and business as he always was and still is at his 60th anniversary.

Durda Vasić-Rački