

## CV Stenbjörn Styring - Uppsala University, Sweden

*Name:* Stenbjörn Axel Styring      *Born:* Stockholm, July 21, 1951

*Address:* Professor Stenbjörn Styring; Chair professor in Molecular Biomimetics  
Department of Chemistry – Ångström, Uppsala University  
Box 523; SE-751 20 Uppsala, Sweden  
Telephone: +46-18-471 6580; +46-70-425 0991 (mobil);  
Fax: +46-18-471 6844  
email: Stenbjorn.Styring@kemi.uu.se



### RÉSUMÉ

Stenbjörn Styring (b 1951) is Professor in Molecular Biomimetics at Uppsala Univ. and held earlier the chair in Biochemistry at Lund Univ. He took his Ph D in biochemistry at the Univ. of Göteborg and then carried out post doctoral studies in Gif-sur-Yvette and at CEA Saclay, France financed by a 5 year personal grant from the Knut and Alice Wallenberg Foundation. He works with natural and artificial photosynthesis and has about 235 publications. His research on photosynthesis has a strong biophysical profile dealing with mechanistic issues of the oxygen evolving enzyme in Photosystem II. His main techniques are EPR and fluorescence spectroscopy. In artificial photosynthesis he focuses on synthesis and EPR spectroscopic studies of manganese, cobalt and ruthenium-manganese compounds intended for photo-catalytic oxidation of water.

He has received the Svante Arrhenius medal from the Swedish Chemical Society and the Edlundska prize from the Royal Academy for Science. He was secretary (1988-91) and President (1997-2000) of the Swedish Biochemical Society. He has served in many evaluation and other committees. Recently he evaluated strategic renewable energy research for the Helmholtz Association; Germany (2009; research for ca 200 MEuro) and the Irish (SFI funded, ca 4 MEuro) Strategic Research Cluster for Solar Energy Conversion (chairman in funding, 2007 and mid-term review panels, 2010). He is a member of the Scientific Advisory board for Max Planck Institute for Dynamics of Complex Technical Systems in Magdeburg, Germany and for the University Priority Program on Solar Light to Chemical Energy Conversion at University of Zurich. He reviews for numerous research councils and scientific journals.

He initiated and is the chairman of the Swedish Consortium for Artificial Photosynthesis (1994-present). This is a major Swedish research initiative with ca 50 researchers. For the Consortium he has since the start been PI for the many large joint grants. The Consortium has >300 publications, has supervised more than 40 PhD's and has involved >120 researchers over the years.

For the EU he coordinated the TMR Network (1996-2000) "Ru-Mn chemistry for artificial photosynthesis" with 10 partners; SOLAR-H in the NEST ADVENTURE program (2005-2007) with 8 partners and recently SOLAR-H2 - the European Solar-Fuel Initiative in FP7 (12 partners in 8 countries, 2008-2012). He has lead networks for the Nordic Energy Research Program. 2009/10 he initiated, created and got funded the now active EUROCORE for Solar Fuels (ESF Eurocore program).

## ACADEMIC DEGREES

<u>Doctoral (PhD) degree:</u>	1985, Ph.D. in Chemistry Göteborg univ. (R. Brändén)
<u>Post-doctoral research:</u>	1985-87, CEA Saclay (Bill Rutherford), and Laboratoire de Photosynthese, (Anne-Lise Etienne) Gif sur Yvette, France
<u>Docent:</u>	1988, Biochemistry, Stockholm University.

## ACADEMIC POSITIONS

<u>Present position (since 2005):</u>	Professor in Biochemistry and Molecular Biomimetics, UU.
<u>Previous positions:</u>	
1996-2005	Professor in Biochemistry, Lund University, Sweden. Head of department 1996-2003.
1999/00	Sabbatical leave in the USA (UC Davis & Michigan State Univ). Fulbright fellow
1991-1995	Personal position as researcher financed by the research council (NFR- The position was titled "Molecular Bioenergetics").
1989-1990	Position as lecturer (50%) at the Dept. of Biochemistry, Univ. of Stockholm.
1987-1991	Assistant professor, (Forskarassistent) (financed by the Knut and Alice Wallenberg Foundation) at the Universities of Göteborg and Stockholm. During 1984-86 the Wallenberg Foundation, Stockholm, Sweden financed 15 long-term grants to biotechnological basic research. I was awarded one of these long term grants (1985-90) to finance my positions and research.

## SUPERVISION

### Graduate student examinations (14; 9 are women)

Caroline Jegerschöld – Ph D 1995	Bengt Svensson – Ph D 1995
Cecilia Tommos – Ph D 1997	Ann Magnuson – Ph D 1998
Maria Rova – Ph D 1999	Paulina Geijer – Ph D 2000
Sindra Peterson – Ph D 2000	Ping Huang – Ph D 2003
Susan Morvaridi – Ph D 2005	Joakim Höglblom – Ph D 2005
Ravi Danielsson – Ph D 2005	Kajsa Havelius - Ph D 2010
Tanai Cardona - Ph D 2010	Johannes Sjöholm – Ph D 2012

Present Ph D students: Fredrik Mokvist.

*10 (8 women) have gone to do post doctoral research outside Sweden.*

### Post-doctoral fellows

I have had 27 post doctoral fellows for a total of nearly 50 years. Some notable are:

Imre Vass – 1989-1991	Head of Biophysics, Biological Research Center, Szeged
Klaas van Wijk – 1993-94	Prof Cornell University, Ithaca NY, very visible
Bart van Rotterdam – 1998-2000	University of Utrecht
Mark Burkitt – 1998	Cancer research Institute, England
Chunxi Zhang – 2000 – 2003	Permanent position, State Key Lab in Beijing
Philipp Kurz- 2005 – 2007	Young career grant Univ. of Kiel Germany

The group has also had long time visits from (among others)

Wim Vermaas – 1993, sabbatical	Professor, Arizona State University
Arnold Hoff (prof from Leiden) – 2000, sabbatical	Deceased
Roman Davydov (prof from Moscow) – 1995-1997	North Western Univ. Evanstone, US

**PUBLICATIONS AND LECTURES:** I have ca 250 publications with ca 6000 citations (Web of Science). I have given more than 100 scientific lectures inside/ outside Sweden.

### COMMISSIONS OF TRUST/ORGANIZATION

2005-present *Program Professor* for Molecular Biomimetics, Uppsala university

1994- present *Chairman* of the Swedish Consortium for Artificial Photosynthesis

1996-2012 *Coordinator* for 3 EU funded networks

1996-2003 *Head of Department* of Biochemistry, Lund university.

2006-2011 *Board member* Dept of Photochem. and Molecular Science, UU.

2014. **Panel member of the Strategic renewable energy review** for the Helmholtz Association, Germany (evaluation of research for ca 200 MEuro)

**Scientific Advisory Board of SOLARDAM** – major solar energy network in the Amsterdam area. 2013/14

**Steering Committee member of AMPEA** (Advanced Materials and Processes for Energy Applications), Joint Programme in the EERA (European Energy Research Area). 2013

**Member of the Scientific Advisory Board** of Univ. of Zuhrich, URPP Light to Energy Strategic Research Cluster. 2012 –

**Member of the Scientific Advisory Board** of the Max Planck Institute for Dynamics of Complex Technical Systems in Magdeburg, Germany. From 2012.

**Organiser of workshops and conferences.** I have organized (as main organizer or in the organising committees) more than 20 meetings and workshops of various sizes.

2007/2010 **Chairman for both funding evaluation and midterm review panels** of the Irish (SFI funded, ca 4 MEuro) Strategic Research Cluster for Solar Energy Conversion.

2009. **Panel member of the Strategic renewable energy review** for the Helmholtz Association, Germany (evaluation of research for ca 200 MEuro)

**Organiser of summer schools** in 1994 at Stockholm univ. funded by the ESF and the Nobel committee and in 2008 in Uppsala funded by the EU funded SOLAR-H<sub>2</sub> network.

**President of the Swedish Society for Biochemistry and Molecular Biology** 1997-2000. This is the Swedish member organisation in FEBS.

**Scientific advisor and supervisor at the University of Karlstad** 1993-2003. My function was to initiate and supervise scientific programmes. I supervised two graduate students and kept formal contacts with the scientific faculty at the University of Karlstad.

**Member in the Executive committee** of the ESF programme "Biophysics of Photosynthesis" between 1991 and 1999 with ca 30 participating laboratories from most European countries.

**Board member of the Swedish Chemical Society** from 1996 to 1999.

**Secretary of the Swedish Biochemical Society** from spring 1988 to autumn 1991.

### AWARDS, MEMBERSHIPS IN ACADEMIES

1999-2000 Fulbright visiting Scholar to UC Davis and Michigan State University

1998 Swedish Chemical Society, the Svante Arrhenius Medal

1996 Member of the Kungliga Fysiografiska Sällskapet in Lund

1995 The Edlundska prize, Royal Swedish Academy of Sciences

1985 5 yr post doc/personal grant from the Knut & Alice Wallenberg foundation.

### SCIENTIFIC NETWORKS and CONSORTIUM. Artificial Photosynthesis

- 2012 I was main/corresponding author of a paper in GREEN where visions of solar fuels and artificial photosynthesis in AMPEA within the EERA (European Energy Research Area) were defined. The paper had 15 co-authors.
- 2009/10 I initiated, built the proposing team and wrote the proposal for the **EUROCORE** (for the ESF) program **EuroSolarFuels**. The proposal was funded and the call for applications in EuroSolarFuels was launched in March 2010.
- 2008-12 I *coordinated* SOLAR-H2, a European Solar-Fuel initiative in the FP7 EU Energy program. 12 Partners in 8 countries 4000 kEuro.
- 2005-07 I *coordinated* SOLAR-H, STRP project in the NEST (New and Emerging Science and Technology) ADVENTURE program. 9 partners in 7 countries. 1800 kEuro.
- 2004 Move to Uppsala university. My groups and the funding for the Consortium for Artificial Photosynthesis is from then administrated from Uppsala university.
- 1996-2000 I *coordinated* a TMR programme Ru-Mn chemistry for artificial photosynthesis with 7 partners from 5 countries. Budget 1800 kECU.
- Since 1994 I am *Chairman and project leader* in a collaborative project denoted Artificial photosynthesis for energy production involving four groups at Lund, Stockholm and Uppsala universities. The project is concentrated in a purpose designed new building in Uppsala from the summer 2006 until present.
- 2007-2011 I am *chairman and contractor* for the joint Consortium grants from the Energy agency and the Knut and Alice Wallenberg Foundation for 2007-2011
- 2012-2016 I am *chairman and contractor* for the joint Consortium grants from the Energy Agency. For the same time interval I am also *lead scientist* for the solar fuels part of the MoSE (Molecular Solar Energy science; PI is Anders Hagfeldt) from the Knut and Alice Wallenberg Foundation.