Curriculum vitae for Bengt Herbert Kasemo

Affiliation: Chalmers University of Technology, Dep. of Physics, SE-412 96 Gothenburg, Sweden.
Email: kasemo@chalmers.se, Tel. +46 (31) 772 3370, Mobile: +46(0)708 28 26 01.
Birth date and place: April 21, 1942, in Åmål, Sweden.
Family: Married: 1969 to Lena, born Sjöwall,
Children: Two boys, Andreas and Jonas born 1972 and 1975, two girls, Anna and Totta, born 1978 and 1985.

EDUCATION/DEGREES

Docent in Physics:	1975	Gothenburg University (GU)
Doctors degree in Physics:	1974	Gothenburg University
Licentiate (M. Sc.) Physics:	1970	Gothenburg University
B. Sc.: Physics	1966	Gothenburg University
Medical school:	1963	Gothenburg University

POSITIONS

2009 -present	**Professor emeritus in Physics**, Dept. of Physics, Chalmers University of Technology,
1992-2009	**Professor in Physics**, Dept. of Applied Physics, Chalmers University of Technology,
1983-1992	**Professor in Physics**, Physics Department, Chalmers University of Technology and GU.
1988-1989	**Fulbright Scholar and Visiting professor** at the Physics Dep., LASSP, Cornell University, USA.
1980-1983	**Associate Professor**, Physics Department, Chalmers University of Technology, Gothenburg,
1974-1980	**Research associate**, Chalmers University of Technology
1967-1974	**Graduate student**, Gothenburg University and Chalmers University of Technology

CONDENSED SUMMARY OF RESEARCH ACTIVITIES ETC

•	Publications in refereed scientific journals:	ca. 525
•	Citations (until Jan 2017): Average 48 per article, h-index 78	ca. 25 400
•	PhD degrees awarded under my supervision	50
•	Invited international conference talks and seminars, 1996 and later	ca. 150
•	Articles on research policy etc.	ca. 15
•	Editorial Boards (present and past):	15
•	External examiner of Ph D's abroad since 1990:	12
•	Referee reports for international journals:	> 10/year
•	Review of international research proposals (US, Canada, Australia, England,…..)	2-5/year
•	Patents	20
•	Start up companies (today 2 existing)	4
•	Board of Directors in Companies; total and (present)	5 (1)

AWARDS AND PRIZES

2007	Gold Medal, Large Size from the Royal Swedish Academy of Engineering Sciences (IVA)
2005	Doctor Technices Honoris Causa at Danish Technical University, Copenhagen
2001	Akzo Nobel Prize, awarded by the Royal Swedish Academy for Engineering Sciences
1999	George Winter Award from the European Society for Biomaterials
1988-89	Fulbright Scholar for research and visiting professor at Cornell University.
1984	G. Engström's ASEA prize for energy research.

GOVERNMENTAL COMMITMENTS (Selected list)

1995-1996	**Member** of the Government's Committee on Research (Forskningsberedningen).
1991-1993	**Member** of the Government's "Committee for Evaluation of R&D in the Energy Sector".

ACADEMY MEMBERSHIPS AND ENGAGEMENTS (Selected list)

2001-	**Elected member** of the Royal Swedish Academy of Sciences (KVA)
1999-02	**Vice President** of the Swedish Royal Academy of Engineering Sciences (IVA)
1994-95	**Member** of "IVA 2000", planning the strategy of the Swedish Academy Engineering Sciences (IVA).
1987-97	**Member** of the Industrial and Scientific Advisory Board of STU/NUTEK.
1986 -	**Elected member** of the Royal Swedish Academy of Engineering Sciences (IVA)

SELECTED LIST OF MANAGEMENT AND UNIVERSITY COMMITMENTS (1990 and later)

2004- 2009	**Co-ordinator** of the EU FP 6 STREP program ***Nanocues***

2001-2005 **Appointed** by the Foundation for Strategic Research (Sweden) to manage a 4 year Research Leadership Training Program for 21 (out 500 applicants) "*Research Leaders of the Future*".

1996-2003 **Program Director** for four SSF programs: "Grad School in Mtrls Sci", "Biocompatible Mtrls", "Polymer techn", "High Perform. Outdoor Electrical Insulation". Total budget 1997-2006; ca. 10 M €.

1995-2012 **Founder**, **Board member and Vice Chairman** of the Competence Center for Catalysis. Starting date June 8, 1995. Specialized on Catalytic Automotive Emission Cleaning. Budget for 2008: Ca. 2.5 M€

1990-2000 **Consortium leader**, Biomaterials Consortium (600 k€/year) (Chalmers + Linköping University).

1986-1999 **Board member** of CIT (Chalmers Industrial Technology). CIT is an independent organization for promotion and realization of collaborative projects between industry and CHALMERS.

COMMITTMENTS AND APPOINTMENTS OUTSIDE THE UNIVERSITY (1999 and later, selected list)

2009-2012 Member of the Prize Committee of the Finnsih **Millenium Technology Prize**

2004- Appointed member of the **"Beirat"** (advisory and eval. board) **of the Fritz Haber Inst-MPI**, Berlin

2004- Appointed member of the Visiting Evaluation Committee of the Mtrls Sci Dep **ETH-Zurich**

2005- Appointed member of **Hefei Ntnl Lab. for Physical Sci at the Microscale** (Chinese Acad of Sciences)

2002 **Vice Chair,** American Vacuum Society (AVS) Annual Conference, Denver, Nov 2002

1999-2002 Elected member of the **Surface Science Division of the American Vacuum Society**

2000- 2011 **Chairman** of the Scientific Council of the **Volvo Research and Education Foundations**

1999 Expert Evaluator for the Danish Research Council of five program proposals

2005 - Chairman of the IVA and KVA project Aspekter på energi och Energiboken. Popular science book about energy (60 000 samples distributed) and an educational day for teachers based on the book.

MEMBER OF EDITORIAL BOARDS OF SCIENTIFIC JOURNALS (previous and present)

Surface Science, Catalysis Letters, Appl. Catalysis, Catalysis Today, Journal of Materials Science: Biomedical Materials, Surface Review and Letters, Chemical Physics Letters, Energy and Environmental Science, Biointerphases.

MEMBERSHIPS IN VARIOUS ORGANIZATIONS (past and present)

The Society for Biomaterials, American Physical Society (APS), American Vacuum Society (AVS), American Chemical Society (ACS), Academy of Osseo integration (AO)

SPINN OFF COMPANIES AND COMPANY RELATIONS

2003 - 20011 On Board of Directors of the listed company Biolin AB. (VC company in the scientific instrument sector (owner of Q-Sense AB (see below)). Since 2010 acting as Senior Scientific Adviser

2001 - 2004 One of four founders of Q-Brake AB, Mellerud. Board member 2001-2003.

2001 – 2003 Board member of Gyros AB, Uppsala. (Developing a bioanalytical platform based on CD technology)

2000 - 2003 Member of Prime New Energy AG's Scientific Board in Switzerland. (Investing in sustainable energy.)

1996 – 2003 One of 4 founders of Q-Sense AB, Gothenburg. Chairman of the board 1999-2003.

1994 – 2000 One of 4 founders of Quartz Pro AB, Veddersta, Stockholm. Board Member.

2010 - Aug. 2013 Founder and Chairman of the Board of the Nanoplasmonic sensing company Insplorion AB

Periodically: Various consultancies and technical due diligences for Volvo AB, EKA Nobel AB, Perstorp AB, Nobelbiocare AB, Prime New Energy AG, Biolin Scientific AB, Insplorion AB and others.

Research Achievements in short - Bengt Kasemo

520 scientific papers (ca. 25 400 citations, average= 48, h=78), 20 patents. Invited international speaker (5-10 per year). Headed (until 2007) a research group of ca. 40 people in basic surface science, bionterfaces, biomaterials, nanoscience and nanotechnology, heterogeneous catalysis and sustainable energy (emission cleaning, photocatalysis, nanofabricated model catalysts, nanoscale kinetics, Monte Carlo simulations). Today the group is ca 20 people and the bio-area has been reorganized in a new group headed by Prof Fredrik Höök. Today employed professor 10 %.

- Pioneering surface chemiluminescence, which ignited a number of papers on charge and energy transfer and non-adiabatic processes on surfaces (mainly in the 70-90ies) (w. Zoric and Chakarov).
- Established leading group in research on Ti implants (collab. P I Branemark, w. Lausmaa, Gold)
- Nanocatalysis; the nanofabrication approach to make model catalysts and MC simulations (w. Zhdanov)
- Photoinduced surface processes e.g. on graphite and in nanoparticles with unique e-h pair excitations driving e.g. chemical reactions, photo-currents and phase transformations in ice (w. Chakarov)
- Supported lipid bilayer (biomembrane) formation (w. Keller, Reimhult, Höök) and its extensions into sensing, cells and drug targeting (w. Gold, Höök, Svedhem).
- Development/commercialization of the QCM-D technique. Patents and Q-Sense AB (w. Rodahl, Höök, Krozer)
- Flow reactor constructions for catalysis for automotive emission cleaning; several RSI papers.
- UHV studies of hydrogen storage and phase diagrams of this system (w Krozer, Zoric, Langhammer).
- Plasmonics and photoactive nanoparticles for photocatalysis, solar cells, sensing, sustainable energy (w. Chakarov, Hägglund, Zäch, Zoric, Larsson, Langhammer).