

Curriculum Vitae for Professor Magnus Willander

Biographical Details:

Magnus Willander was born 1948-07-02 in Sweden, and has Swedish nationality. He is since 2006 chair professor at Linköping University in physical electronics and nanotechnology (retired August 2015, but employed again without salary).

Academic Qualifications:

Between 1973-12-30 and 1977-09-06 he obtained 4 academic degrees, M.Sc. in Fundamental Physics and Mathematics (Lund University), Engineering Physics (Uppsala University), Economics (Stockholm University) and in Pedagogical Science (Malmö University). In 1984 he received Dr Sci. degree in Physics in Royal Institute of Technology, Stockholm. He became a docent in physics in 1988. He has been appointed as chair professor since 1994. All degrees in Sweden.

Employments:

In 1973 and 1974 Willander was teacher in physics and mathematics. 1976 to 1980 he was development engineer in electronics in Philips Corp., Stockholm, responsible to develop a new printer technology (the printers were later sold for around one billion Skr during some years). Between 1980 and 1984 Prof. Willander was assistant in the Physics Department in Royal Institute of Technology in Stockholm (where he obtained the Dr degree). 1984-1985 he was specialist in electronics in Nobel Industries, Stockholm. From spring 1985 to December 1995 he was employed as a senior lecturer in Linköping University, Physics Department. He was appointed to Chair Professor in Physics, particularly in Nanoscience and Mesoscopic Physics, in Gothenburg University in 1995. In 2005 he was appointed Chair Professor in Linköping University, but continued to work (20 %) as guest professor in Gothenburg University to 2008. He has also during several periods from 1999 been employed as a distinguished visiting scientist in Tokyo Institute of Technology, Japan, and between 2013-2016 in National Center of Nanoscience and Nanotechnology, Chinese Academy of Science, Beijing, China.

Some Awards, Duties, Grants etc:

Fellow of the American Physical Society in 2011, Fellow of Institute of Physics (IOP) in 2012, and Fellow of The NANOSMAT Society in 2015. Appointed to Elite Professor in King Saud University, in 2011. Foreign expert, Chinese Academy of Science. Professor in Beijing National Center for Nanoscience and Technology (part time), Chinese Academy of Science, from 2013. Journal of Chemical Sensors (Cognizure) announces since 2012 an annual prize as "Professor Magnus Willander Award in the area of chemical sensors", see Cognizure Corporation, ScienceJet Journal (the other awards are in the name of Rudolph A. Marcus, Mario Capecchi, Joseph Wang, Pulickel M. Ajayan and William E Acree, Jr). Journal of Nanoscience Letters (Simplex) dedicated Vol. 1, issue 2 to Professor Magnus Willander. In 2015 Prof. Willander got the same award in the scientific journal "Science Advances Today", and they also dedicated a special issue in his name. He has received several best paper award in different scientific journals. He is a member of editorial boards of about 10 different scientific journals and of the Honorary Editorial Board of Solid State Electronics (Elsevier) 1997-2012. Guest editor several times in different scientific journals. The prize for the best environmental research/development in 2005 in Sweden for an entrepreneur company which Willander founded (jury: research funding agencies in Sweden). The prize for the best Scandinavian nano-company (jury: investors) in 2011, the company also founded by

Willander. Organizer of many big international conferences (MRS, IEDM etc). More than 70 invited review articles. More than 120 Invited/Keynote Talks in international scientific conferences. Evaluator for many professorships abroad and in Sweden. Professor Willander has supervised more than 50 students to their Dr degrees in physics and 3 for their “small” Dr degree (Licentiat degree). In addition Willander has supervised numerous post doc.. Prof. Willander has coordinated 4 different EU projects and participated in more than 10 EU projects.

A Short Research Resume (since 1986):

Between 1986 and 1989 Willander built up a research group in Linköping University which did pioneering works on silicon/silicon-germanium devices, polymer devices, and silicon carbide. He included also a lot of theoretical and simulation works during 1990-1995 on optical and transport properties in his research.

From 1996 Professor Willander built up another new research group in Gothenburg more involved in nanoscience including solid, soft and liquid based materials, including both experimental works like single molecule detection, water transistor and its application, intracellular measurements with nanowires etc and theoretical works like weak localization, Bose-Einstein condensation in nanostructures, plasmonics, mathematics for life science, etc. Willander had also a strong influence in building up the MC2 laboratory in Chalmers in Gothenburg. Around 2002 Willander started up the experimental work on ZnO nanostructures. He also founded a research company on nanostructures.

From 2006 Professor Willander started for the third time up from beginning a research group in Linköping University, with focus on research in metaloxide nanostructures, and other solid nanostructures and used them for application in bio-sensing, lighting, energy harvesting etc. Willander also restarted the nano-company in Norrköping/Linköping.

In 2014 Prof. Willander for the 4th time built up a new research group from beginning in Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Science, working on chemistry and nanoenergy and nanosensors (National Center for Nanoscience and Technology, China).

Publications:

Databases	Citations (all)	Since 2011	h-index	Number of publications	Since 2011
Web of Science	>12800		49	799	
Scopus	>13500		50	834	
Google Scholar	>19100		59	>1100	

Willander has also published 10 international scientific books.

Five most cited journal publications according to Web of Science (Jan. 2018):

1. III-nitrides: Growth, characterization, and properties, Journal of Applied Physics, Vol.87, Issue 3, pp 965-1006, 2000. Citations: 913.
2. Field-effect mobility of poly(3-hexylthiophene), Applied Physics Letters, Vol. 53, Issue 3, pp 195-197, 1988. Citations: 340.
3. Zinc oxide nanorod based photonic devices: recent progress in growth, light emitting diodes and lasers, Nanotechnology, Vol. 20, Issue 33, 2009. Citations: 373

4. Identification of oxygen and zinc vacancy optical signals in ZnO, Applied Physics Letters, Vol. 89, Issue 26, 2006. Citations: 243.
5. New materials for micro-scale sensors and actuators: An engineering review, Materials Science and Engineering R-Reports, Vol.56, Issue 1-6, pp1-129, 2007. Citations: 258.