
Personal information

Family name, First name: ZHANG ZHEN

Date of birth: Jan. 28, 1979

URL for web site: <http://personal.teknik.uu.se/zhenzhang/>

1, Higher education degree(s)

▷200007, BSc, Dept. Material Sci. & Eng., University of Sci. & Tech. of China (USTC)

▷200307, MSc, Shanghai Institute of Ceramics, Chinese Academy of Sciences (SICCAS)

2, Doctoral degree

▷200803, PhD, Royal Institute of Technology (KTH), Sweden,

Thesis: “Integration of Silicide Nanowires as Schottky Barrier Source/Drain in FinFETs”

3, Current positions

▷202001-present, Full professor in electronics, Wallenberg Academy Fellow, Department of Electrical Engineering, Uppsala University (UU), Sweden

▷201308-present, Adjunct researcher, IBM T. J. Watson Research Center, Yorktown Heights, USA

4, Previous positions

▷201804-201912, Full professor in electronics, Wallenberg Academy Fellow, Department of Engineering Sciences, UU

▷201706-201803, Associate professor, Docent and Senior Lecturer, Wallenberg Academy Fellow, Department of Engineering Sciences, UU

▷201308-201705, Assistant professor (tenure track), Department of Engineering Sciences, UU

▷201009-201307, Research Staff member (a tenure researcher position), IBM T. J. Watson Research Center, Yorktown Heights

▷200805-201009, Postdoctoral Researcher, IBM T. J. Watson Research Center, Yorktown Heights

5, Grants, Awards and honors

▷ 202201 – 202312, **Olle Engkvist postdoc grant**, 2.4 million SEK

▷ 202107- 202606, **Wallenberg Academy Fellow (senior phase)**, 16.25 million SEK (KAW grant + University match)

▷ 202001- 202312, **Swedish Research Council (VR) project grant** ‘A novel low noise Si nano-sensor for rapid antibiotic susceptibility tests’, 4.4 million SEK

▷ 201910 – 202109, **Olle Engkvist postdoc grant**, 1 million SEK

▷ 201901- 202112, **VR China-Sweden research collaboration grant**, 3 million SEK

▷ 201701-202112, **Future Research Leaders grant**, Swedish Strategic Research Foundation (SSF), 12 million SEK

▷ 201607-202106, **Wallenberg Academy Fellow**, 15 million SEK (KAW grant + University match)

▷ 201501-201812, **VR young researcher grant**, 4 million SEK

▷ 201501-201812, Nanofabrication work package leader (my share as a co-PI: 3 million SEK) of a **VR framework project** ‘The 3NANO electronic sensor for single-base detection’ (9 million SEK in total, PI: Prof. Shili Zhang, UU)

▷ 201502-201701, **Carl Tryggers Grant** to support a postdoc fellow, ca. 0.5 million SEK

▷ 201407-201706, **Göran Gustafssons Prize to young researcher**, 0.5 million SEK

▷ 201407-201906, Interconnect work package leader (my share: 8.3 million SEK) in the **SSF framework project** ‘*Ge nanotrådstransistorer för sekventiell 3D integration*’ (32 million SEK in total, PI: Prof. M. Ostling, KTH)

▷ 201309-201608, The 5th **Ingvar Carlsson Award** from **SSF**, 3 million SEK

▷ 200805-201307, 12 **Invention Achievement Awards** from IBM CEO Office

▷ 200605, **Chinese Government Award for Outstanding Students Abroad**, (only 6 Chinese students in Sweden were awarded in 2006)

▷ 200307, “**Liu-YongLing**” Scholarship, awarded by Chinese Academy of Sciences

6, Teaching (as course responsible)

- ▷ 201310- , Electrical characterization for thin film technology (PhD course)
- ▷ 201409- , Semiconductor Electronics (1TE039) (Undergraduate course)
- ▷ 201601- , Micro- and Nano- technology II (1TE018) (Undergraduate course)

7, Major research interests

- ▷ Nanofabrication technology: process design, development and integration
- ▷ Semiconductor nanosensors (nanowire and nanopore based) for environment monitoring, rapid antibiotic resistance tests and single molecule analysis
- ▷ Low-frequency noise in biosensors: solid-solid and solid-liquid interfaces
- ▷ Novel device design and fabrication/characterization for 3-D sequential integration in CMOS
- ▷ Cryogenic operation of nanodevices

8, Established research platforms

- ▷ Si technology based nanofabrication around a state-of-art electron beam lithography system
- ▷ A comprehensive electrical characterization platform for solid and solid-liquid systems

9, Intellectual output (Full list is available at <http://personal.teknik.uu.se/zhenzhang/publications.html>)

Overview of publication records (citation data from Google scholar 2023-04-11)

No. of publications: 123

Citations: >4000

Hirsch index: 30

Overview of patent records

Total no. of submitted disclosures:> 60 **No. of filed/issued US patents : 54**

10, Social activities and leadership

- ▷ Member of the steering group, Angstrom Materials Academy, UU
- ▷ Board member, Tandemlaboratoriet, UU
- ▷ Coordinator of PhD supervisors’ forum @ Division of Solid-State Electronic, Department of Electrical Engineering, UU.
- ▷ Research infrastructure committee member; Nature Science and Engineering Faculty, UU
- ▷ IEEE senior Member
- ▷ Editorial Board, IEEE journal of electron devices society
- ▷ 2017-2020 SSF advanced leadership training program for the **Future Research Leaders**
- ▷ 2016-2020 KAW mentorship program arranged for **Wallenberg Academy Fellows**
- ▷ 2014-2016 SSF leadership training program for the **Ingvar Carlsson Awardees**
- ▷ Project coordinator for setting up the electron-beam based nano-fabrication at the Angstrom lab.
- ▷ Over 5 years of cross-site project coordination experience at IBM-NY (with Dr. C. Lavoie)
- ▷ Referee for > 20 international journals among which several are highly prestigious, such as Nature Nanotechnology, Nature electronics, ACS Nano.