Curriculum Vitae – Anja Boisen

Personal data & contact information:

- Date and place of birth: March 16, 1967, Glostrup, Denmark, Citizenship: Danish.
- Married to Frank Olsen. Two children; Sofus (12 years) and Sine (10 years).
- Phone numbers: +45 4525 5727 (office), + 45 45255700 (switchboard)
- Email&URL:anja.boisen@nanotech.dtu.dk www.nanotech.dtu.dk

Education and academic degrees:

- *High School, natural sciences*, Høje Taastrup Amtsgymnasium (‘86)
- *MSc in Physics*, Univ. of Roskilde (’93)
- *Industrial PhD in MicroElectroMechanicalSystems*, Tech. Univ. of Denmark (’97)

Employment track & research affiliations:

- Professor at Dept. of Micro and Nanotechnology (DTU Nanotech). Group leader of the Nanoprobes project. (Jan. '05 – present), Director of VKR Centre of Excellence ‘NAMEC’ (apr. '09 – present),
- Associate Professor at MIC and group leader of Nanoprobes project. (Oct. '03 – Dec ’04)
- Maternity leave (Feb. ’03 – Sep. ‘03)
- Associate Professor, project leader and manager of 3 other project leaders at MIC, DTU (Aug. '02 - Feb. '03)
- Development engineer at Cantion A/S (on leave from MIC) (Feb. '02 - Jul. '02)
- Associate professor and project leader of Bioprobes project (Jan. '02)
- Maternity leave (Jun. ’01 – Dec. ‘01)
- Associate professor and project leader of Bioprobes project, MIC, DTU (Jul. ’99 – Jun. ‘01)
- Assistant Professor at MIC, DTU (Apr. ’97 – Jun. ‘99)
- Industrial PhD student in DME A/S – Danish micro engineering and at MIC, DTU (Apr. ’94 – Mar. ‘97)
- High School teacher at Vester Borgerdyd, Copenhagen (Aug. ’93 – Apr. ‘94)
- High School teacher at Sankt Annæ, Copenhagen (Aug. ’92 – Dec. ‘92)

Honors, awards, and funding:

- Recipient of ERC Adv Grant (2013)
- The Sapere Aude ‘DFF-Topforsker’ from the Danish Research Council (2012)
- The EliteForsk award from the ministry of Research, Innovation and Higher Education (2012)
- The Villum Kann Rasmussen award (Denmark’s largest research award) (2008)
- Direktør Ib Henriksens prize for groundbreaking sensor technology research (2007)
- AEG ‘Elektronikpris’ for extraordinary research in the electro technical field (2000)
- Has since 1999 attracted funding to a total amount of more than 90 mio dkr (my share).

Selected professional activities:

- As of September 2002 member of the Steering committee for the Micro and Nano Engineering (MNE) conference. Chair of the 2007 conference which had 600 participants.
- Organised the international workshop on nanomechanical sensors in May 2006 (100 participants).
- Member of the Danish research council on Production and Technology (FTP) (2005-2010)
- Since 2007 member of the Danish Academy of Technical Sciences (ATV) and of the ATV think tank
- Member of the program committee for the Norwegian research program ‘Nanomat’. (2008-2011)
- Member of the steering committee for the Danish foresight on nanotechnology (2004).
- Member of the board of the Danish National Advanced Technology Foundation (2009 - 2017)
- Member of the Board for National Research Centre for the working environment (2007 – 2010).
- Chair of the cross-institutional organisation NanoDTU (2010-2012)
- Since 2012 member of the editorial board of the journal Microelectronic Engineering
- Vice chair of the board of the Norwegian Research Council ‘Nano2021’ (2012-2016)

Research activities:

Micro and nano mechanical sensors – using cantilever, pillar, string and bridge structures for label free detection. Nanofabrication and new materials (polymers). Oral drug delivery using micro-containers.

Patenting & innovation:

- Co-founder of company Cantion A/S – now owned by Nanonord - and company Silmeco
- 12 international patent applications and 3 issued patents + 1/2 years of industrial R&D experience
- Past and present collaborations: Grundfos, Virogates, Unisensor, Danfoss, Foss, Radiometer, DME.
- My students have won more than 10 Venture prizes

Publication and citation statistics:

- **139** peer-review journal papers and a total of **150** reviewed conference proceedings.
- Citations: 2971, Hirsch h-index: 31. [ISI Web of Science, Nov. 3, '13]. Research ID: F-9442-2011
- Citations: 4779, Hirsch h-index: 38. [Google scholar citations].

Selected publications 2011-2013:

1. Tom Larsen, Silvan Schmid, Luis G. Villanueva, and **Anja Boisen**, Photothermal Analysis of Individual Nanoparticulate Samples Using Micromechanical Resonators, ACS Nano, 2013, 7 (7), pp 6188–6193

2. Paolo Marizzaa, Stephan S. Keller, Anette Müllertz, **Anja Boisen**, Polymer-filled microcontainers for oral delivery loaded using supercritical impregnation, Journal of Controlled Release, Available online 2 October 2013

3. Xiaolong Zhu, Lei Shi, Lei, Michael Stenbæk Schmidt; **Anja Boisen**, Ole Hansen, Jian Zi, Sanshui Xiao, Mortensen, N. Asger., Enhanced Light–Matter Interactions in Graphene-Covered Gold Nanovoid Arrays, Nano Letters, Vol. 13, No. 10, 2013, p. 4690–4696.

4. Jaeyoung Yang , Mirko Palla , Filippo Giacomo Bosco, Tomas Rindzevicius, Tommy Sonne Alstrøm, Michael Stenbæk Schmidt, **Anja Boisen**, Jingyue Ju , and Qiao Lin, Surface-Enhanced Raman Spectroscopy Based Quantitative Bioassay on Aptamer-Functionalized Nanopillars Using Large-Area Raman Mapping, ACS Nano, 2013, 7 (6), pp 5350–5359.

5. Shoko Yamada, Silvan Schmid, Tom Larsen, Ole Hansen, **Anja Boisen**, Photothermal infrared spectroscopy of airborne samples with mechanical string resonators, Anal. Chem. 2013, DOI: 10.1021/ac402585e

6. Schmid, S.; Kurek, M.; Adolphsen, J. Q.; **Boisen, A.,** Real-time single airborne nanoparticle detection with nanomechanical resonant filter-fiber. Scientific Reports 2013, 3.

7. M. S. Schmidt, J. Hubner, and **A. Boisen**, Large Area Fabrication of Leaning Silicon Nanopillars for Surface Enhanced Raman Spectroscopy, Advanced Materials, 24(10) (2012) Pages: OP11-OP18 DOI: 10.1002/adma.

8. **Boisen**, S. Dohn, S. Keller, S. Schmid and M. Tenje, Cantilever-like micromechanical sensors, Reports on Progress in Physics, 74(3) (2011) DOI: 10.1088/0034-4885/74/3/036101

9. F.G Bosco, E.T. Hwu, C.H. Chen, S. Keller, M. Bache, M.H. Jakobsen, I.S. Hwang and **A. Boisen,** High throughput label-free platform for statistical bio-molecular sensing, Lab on a Chip, 11(14) (2011) 2411-2416

10. M.F. Khan, S. Schmid, P.E. Larsen, Z.J. Davis, W. Yan, E.H. Stenby , **A. Boisen**, "Online characterization mass density and viscosity of pL fluid samples with suspended microchannel resonator" Sensors and Actuators B 185 (2013) 456– 461