

Masoomeh Ghasemi

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WORK EXPERINCE

SEP 2017 – PRESENT	Assistant professor, Persian Gulf University, Booshehr, Iran
MAY 2016 – AUG 2107	Postdoc, Lund University and KTH Royal Institute of Technology, Sweden
JAN 2013 – AUG 2015	Lecturer, Lund University, Lund Sweden
SEP 2006 – DEC 2010	High school Physics teacher, Booshehr, Iran

EDUCATION

SEP 2012 – MAY 2016

Ph.D in Engineering Physics, Lund, University, Lund, Sweden

Thesis title: Thermodynamic modeling of materials systems for nanowires: CALPHAD, DFT and experiments

JAN 2011 – JUL 2012

M.Sc in Biophysics, Lund, University, Lund, Sweden

Thesis title: Separation of Deformable Hydrogel Particles in the Deterministic Lateral Displacement Device

PUBLICATIONS

1. E. Leshchenko, **M. Ghasemi**, V. Dubrovskii and J. Johansson, “Nucleation-limited composition of ternary III–V nanowires forming from quaternary gold based liquid alloys”, *Cryst. Eng. Comm.* 20, 1649-1655, (2018)
2. J. Johansson and **M. Ghasemi**, “Kinetically limited composition of ternary III-V nanowires”, *Phys. Rev. Mater.* 1, 040401 (2017)
3. **M. Ghasemi**, M. Selleby and J. Johansson, “Thermodynamic assessment and binary nucleation modeling of Sn-seeded InGaAs nanowires”, *J. Crys. Growth* 478, 152-158, (2017)
4. **M. Ghasemi** and J. Johansson, “Phase diagrams for understanding gold-seeded growth of GaAs and InAs nanowires”, *J. Phys. D: Appl. Phys.* 50, 134002, (2017)
5. J. Johansson and **M. Ghasemi**, “The composition of gold alloy seeded InGaAs nanowires in the nucleation limited regime”, *Crystal Growth Des.* 17, 1630-1635, (2017)
6. J. Grecenkov, V. G. Dubrovski, M. Ghasemi and J. Johansson. “Quaternary chemical potentials for gold-catalyzed growth of ternary InGaAs nanowires”, *Crys. Growth Des.* 16, 4526-4530 (2016)
7. C. J. Müller, V. Bushlya, **M. Ghasemi**, S. Lidin, M. Valldor and F. Wang, “Ternary intermetallic compounds in Au–Sn soldering systems—structure and properties”, *Mater. Sci.* 50, 7808 (2015)
8. **M. Ghasemi**, Z. Zanolli, M. Stankovski and J. Johansson, “Size- and shape-dependent phase diagram of In-Sb nano-alloys”, *Nanoscale* 7, 17387-17396 (2015)
9. **M. Ghasemi** and Jonas Johansson, “Thermodynamic Assessment of the As-Zn and As-Ga-Zn Systems”, *J. Alloys Cmpnd.* 600, 178-185 (2014)
10. F. Yang, M. E. Messing, K. Mergenthaler, **M. Ghasemi**, J. Johansson, L. R. Wallenberg, M. Pistol, K. Deppert, L. Samuelson, M. H. Magnusson. “Zn-doping of GaAs nanowires grown by Aerotaxy”, *J. Crystal Growth* 414, 181-186 (2015)
11. **M. Ghasemi**, B. Sundman, S. G. Fries, J. Johansson, “The thermodynamic assessment of Au-In-Ga system”, *J. Alloys Cmpnd.* 600, 178-185 (2014)
12. **M. Ghasemi**, S. Lidin, J. Johansson, “The phase equilibria in the Au-In-Ga ternary system”, *J. Alloys Cmpnd.* 588, 474-480, (2014)

13. **M. Ghasemi**, S. Lidin, J. Johansson, F. Wang, "Bonding in intermetallics may be deceptive – the case of the new type structure Au_2InGa_2 ", *Intermetallics* 46, 40-44 (2014)
14. S. Gorji Ghalamestani, M. Ek, **M. Ghasemi**, P. Caroff, J. Johansson, K.A. Dick, "Morphology and Composition Controlled $\text{Ga}_x\text{In}_{1-x}\text{Sb}$ Nanowires: Understanding Ternary Antimonide Growth" *Nanoscale* 6, 1086-1092 (2014)

CONFERENCES

1. "Constructing an As-Ga-In-Sn thermodynamic database for modelling the growth of InAs, GaAs and $\text{In}_x\text{Ga}_{1-x}\text{As}$ nanostructures", CALPHAD XLVI conference, France, Jun 2017. **Oral**
2. "Applications of phase diagrams for understanding nanowire growth", MRS Fall 2016, US, DEC 2016. **Oral**
3. "First-principles study and thermodynamic modeling of Zn and Au impurities and vacancies in GaAs", CALPHAD XLV conference, Japan, May 2016. **Oral**
4. "First-principles study and thermodynamic modeling of foreign impurities and native defects in GaAs", European MRS Spring 2016, France, May 2016. **Oral**.
5. "First-Principles Study and Thermodynamic Analysis of Impurities in GaAs", The 6th International Conference on the Nano-Structures, Iran, Mar 2016. **Poster**.
6. Nanowire growth workshop and nanowires workshop 2015, Spain, Oct 2015. **Poster**.
7. "The phase diagram of the In-Sb nanoalloys", CALPHAD XLIV conference, Italy, Jun 2015. **Oral**.
8. "Studying the phase diagram of the Au-In nanoalloys using the CALPHAD method combined with DFT calculations", MRS Spring 2015, US, Apr 2015. **Oral**.
9. "Thermodynamic description the of Ga-As-Zn system", TOFA 2014, Czech Republic, Sep 2014. **Oral**.
10. 8th Nanowire Growth Workshop, The Netherlands, Aug 2014.
11. Summer school: "Advanced thermodynamic assessment", France, Jun 2014.
12. "The 2014 CAMD summer school on electronic structure theory and materials design", Denmark, Aug 2014.
13. "School on multiscale modeling and use of Espresso++ and VOTCA", Oct 2014, Germany.
14. "Ternary phase diagrams for understanding NW heterostructures". The 5th International Conference on the NanoStructures, Iran, Mar 2014. **Oral**.
15. "Separation of deformable hydrogel microparticles in deterministic lateral displacement devices", The 5th International Conference on the Nano-Structures, Iran, Mar 2014. **Won poster prize**.
16. "Our tools in nanoscience". Summer school, Sweden, Aug 2013.
17. "Ternary phase diagrams for understanding NW heterostructures", Nanowire growth workshop, Switzerland, Jun 2013. **Poster**.
18. "Thermodynamic modeling and assessment of the Au-In-Ga system", CALPHAD XLII conference, Spain, May 2013. **Oral**.