

Website update – ESR-ER presentation template

Marie-Curie Fellow

Name: Eriksson

First Name: Gustav Jens Peter

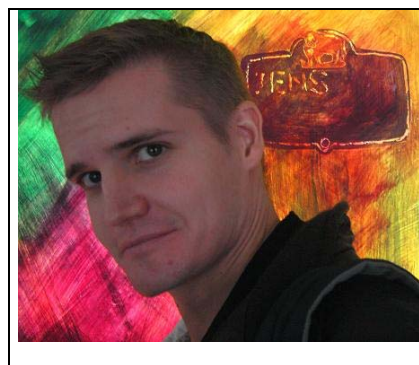
Age: 30

Nationality: Swedish

Position (ER/ESR): ESR

Host institution: CNR-IMM

Contract duration: 36 months



Short Education Background (10 lines max.)

2008 – 2010: PhD in Nanoscience. Scuola Superiore of the University of Catania.

2004 – 2006: Bachelor of Science in Physics. Linköping University, Institute of Technology, Department of Physics, Chemistry and Biology (IFM).

2003 – 2005: Master of Science in Electrical Engineering, principal direction Electronic Design. Linköping University, Institute of Technology, Department of Electrical Engineering (ISY).

2000 – 2003: Bachelor of Science in Electrical Engineering, principal direction Hardware construction. Linköping University, Institute of Technology, Department of Electrical Engineering (ISY).

Research focus and main activities carried out in the scope of the project (10 lines max.)

My research project is within the field of nanoscale transport in wide bandgap semiconductors. Specifically, the focus is on power devices, device processing and development on cubic/hexagonal silicon carbide heterostructures. The processing includes formation and characterization of ohmic and Schottky contacts, oxidation, ion implantation etc. Characterization is performed by a wide variety of techniques, but a large focus is on Scanning Probe Microscopy techniques for electrical and structural characterization. The devices include e.g. dual-band light detectors based on the different band gaps in the cubic and hexagonal SiC polytypes.

Publications (please specify when the publication has been issued in the scope of the MANSiC project)

MANSiC related:

1. "*Nano-Electro-Structural Evolution of Ni-Si Ohmic Contacts to 3C-SiC*"

Jens Eriksson, Fabrizio Roccaforte, Filippo Giannazzo, Raffaella Lo Nigro, Giuseppe Moschetti, Vito Raineri, Jean Lorenzzi and Gabriel Ferro – *Materials Science Forum Vols. 615-617 (2009) pp 569-572*.

2. "*Improved Ni/3C-SiC contacts by effective contact area and conductivity increases at the nanoscale*". Jens Eriksson, Fabrizio Roccaforte, Filippo Giannazzo, Raffaella Lo Nigro, Vito Raineri, Jean Lorenzzi, Gabriel Ferro – *APPLIED PHYSICS LETTERS* **94**, 112104 (2009).

Non-MANSiC related:

3. "*ZnO nanoparticles or ZnO films, a comparison of the gas sensing capabilities*", Jens Eriksson, Volodymyr Khranovskyy, Fredrik Söderlind, Per-Olov Käll, Rositza Yakimova, Anita Lloyd Spetz, *Sensors and Actuators B* 137, pp 94–102 (2009).

4. "Effect of oxygen exposure on the electrical conductivity and gas sensitivity of nanostructured ZnO films", Khranovskyy V., Eriksson J., Lloyd Spetz A., Yakimova R., Hultman L, *Thin Solid Films* 517, pp 2073–2078 (2009).