

Website update – ESR-ER presentation template

Marie-Curie Fellow

Name: Galben-Sandulache

First Name: Irina-Georgiana

Age: 28

Nationality: Romanian

Position (ER/ESR): ESR

Host institution: Institute National Polytechnique de Grenoble,
France (INPG)

Contract duration: 01/10/2008 – 30/09/2010



Short Education Background (10 lines max.)

2000 – 2005 Bachelor of Science

Faculty of Chemical Engineering, Technical University «Gheorghe Asachi» of Iasi, Romania
Specialization: Chemical Engineering

2005 – 2006 Master of Science

Faculty of Chemical Engineering, Technical University «Gheorghe Asachi» of Iasi, Romania
Specialization: Chemical Engineering

Since October 2007 – PhD student

Laboratoire de Matériaux et du Génie Physique, Institute National Polytechnique de
Grenoble, France (INPG)

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

My PhD goal is the growth of bulk 3C-SiC single crystals by the Continuous Feed Physical Vapor Transport process (CF-PVT).

In this context several topics will be addressed:

- stability of the 3C polytype at high temperature, understanding of the 3C to 6H solid state transition which could limit the process development
- study of the nucleation and growth of 3C-SiC crystals
- development and optimization of the process through a coupled approach involving experimentation/modeling and characterization

- development of structural characterization tool and method for bulk crystals such as birefringence microscopy

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

3. "The 3C – 6H polytypic transition in SiC as revealed by diffuse X-ray scattering", J. Aube, A. Boule, I.G. Galben-Sandulache, D. Chaussende, Applied Physics Letters, 2009, accepted

1. "Nitrogen doping of 3C-SiC single crystals grown by CF-PVT", J. Eid, I-G. Galben, G. Zoulis, T. Robert, D. Chaussende, S. Juillaguet, A. Tiberj and J. Camassel, Materials Science Forum, Vols. 615 - 617, 2009, p. 45 – 48;

2. "Optical investigation of electronic properties in bulk and surface region of sublimation-grown 3C-SiC crystals", G. Manolis, K. Jarasiunas, I.G. Galben, D. Chaussende, Materials Science Forum, Vols. 615 - 617, 2009, p. 303 – 306;