

Website update – ESR-ER presentation template

Marie-Curie Fellow

Name: **Jean Carlos da Conceição Lorenzzi**

First Name: **Jean Carlos**

Age: **28**

Nationality: **Brazilian**

Position (ER/ESR): **ESR**

Host institution: **Université Claude Bernard Lyon 1 - France**

Contract duration: **36 months**



Short Education Background (10 lines max.)

I have been graduated in Material Science Engineer at Federal University of Santa Catarina with a grade of 8.6 (0-10). During five years of Engineering School I received an eminent theoretical support united to a visible technological application. The last year of my Engineering School I was selected to make an international internship at Aveiro University (Portugal) and I stayed there one year studying and working. After that, I have obtained a title Master in Materials Science (M.Sc.) by ERASMUS MUNDUS programme, an international top-level programme selected by the European Union, at Aveiro University (Portugal), Hamburg University of Technology – TUHH (Germany) and Aalborg University (Denmark).

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

The main activities involve the growth of 3C-SiC epitaxial layers on a-SiC substrates using the Vapour-Liquid-Solid approach. This non conventional technique has already given very promising results since the defects called twins can be eliminated inside the 3C layers using specific growth conditions. The aim of this project is to improve the VLS process itself in terms of reproducibility, material quality, doping level, surface roughness and sample size. Since these good quality 3C layers are at the base of MANSIC material, part of the work will be also to provide the other partners of the network with this samples.

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

1. Jens Eriksson, Fabrizio Roccaforte, Filippo Giannazzo, Raffaella Lo Nigro, Giuseppe Moschetti, Vito Raineri, Jean Lorenzzi and Gabriel Ferro, “**Nano-Electro-Structural Evolution of Ni-Si Ohmic Contacts to 3C-SiC**”, Materials Science Forum Vols. 615-617 (2009) pp 569-572.
2. M. Marinova, I. Tsiaoussis, N. Frangis, E. K. Polychroniadis, O. Kim-Hak, J. Lorenzzi and G. Ferro, “**Searching for Ge clusters inside 3C-SiC Layers Grown by Vapor-Liquid-Solid Mechanism on 6H-SiC substrates**”, Materials Science Forum Vols. 615-617 (2009) pp 185-188.
3. Jens Eriksson, Fabrizio Roccaforte, Filippo Giannazzo, Raffaella Lo Nigro, Vito Raineri, Jean Lorenzzi and Gabriel Ferro, “**Improved Ni/3C-SiC contacts by effective contact area and conductivity increases at the nanoscale**” Applied Physics Letters 94, (2009) 112104.
4. Olivier Kim-Hak, Gabriel Ferro, Jacques Dazord, Maya Marinova, Jean Lorenzzi, Efstathios Polychroniadis, Patrick Chaudouët, Didier Chaussende, Philippe Miele, ” **Study of the 3C-SiC nucleation from a liquid phase on a C face 6H-SiC substrate**”, Journal of Crystal Growth, In Press, Corrected Proof, Available online 1 February 2009.