

CURRICULUM VITÆ of Antonella Poggi

<i>Name</i>	Antonella Poggi
<i>Nationality</i>	Italian
<i>Born in</i>	Budrio (BO), 06/01/1959
<i>Work Address</i>	CNR – IMM Bologna Via P. Gobetti, 101 I-40129 Bologna
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EDUCATION

11 November 1983 University of Bologna, Degree in Physics

Thesis on the analysis of carrier lifetime and impurity gettering in mono-crystalline silicon.

LANGUAGE SKILLS

English good

MAIN RESEARCH FIELDS

Strong activity devoted to the development of microelectronic technologies on both silicon and silicon carbide.

Extensive experience in silicon dry etching for microelectronics devices fabrication and in deep Inductively Coupled Plasma etching for micro-electro-mechanical systems.

Study of the technological processing for silicon VLSI application: advanced processes for CMOS technology.

Fabrication and electrical characterisation of silicon carbide electronic for high temperature, high power and high frequency application: device implementation mainly in MOSFET technology.

Technological processing for MEMS application: silicon micromachining, particularly concerning the realization of silicon optical bench and the fabrication of devices for gas sensing.

MEMS technology for the fabrication of physical and chemical sensors on both silicon and silicon carbide.

Silicon micromachining technology for integrated multisensing devices, ultra-low-power hotplates for solid state gas sensing, microfluidic devices and micromachined gas-chromatographic devices.

PROFESSIONAL EXPERIENCE

Since April 2015 Director of Proambiente s.c.r.l., a public-private consortium controlled by CNR.

Since November 1996 Researcher at the Institute of Microelectronic and Microsystems of the Italian National Research Council (CNR-IMM former LAMEL) in Bologna in permanent position.

Responsible of dry etching processing from 1992, she has coordinated the start-up of two commercial plasma equipments for microelectronics application and developed the recipes to etch silicon dioxide, silicon nitride, polysilicon and aluminium. Furthermore, she has collaborated to evaluate the technical characteristics of the Inductively Coupled Plasma etching system acquired in 2005 for deep silicon etching based on Bosch process. Thanks to the technological processing expertise on dry reactive ion etching and deep ICP etching she has collaborated with different IMM groups: Silicon Microelectronic, Silicon Carbide Devices, Silicon/Silicon carbide MEMS and Sensors / Microsystems.

Responsible for the technological department (including a class 100 clean room facility) of CNR-IMM from November 1998 until December 2000.

Co-responsible with Dr.Ing. G.C. Cardinali of the research contract “Silicon Optical Bench Technology” between CSELT (Centro Studi e Laboratori Telecomunicazioni) and CNR-IMM.

Responsible of the Research Unity CNR-IMM for the Italian national project FIRB RBNE01SLRJ “Microsystems for genetic diagnostic”-Research Unity 005.

Responsible of the Editorial Board ECSCRM 2004.

March 1994 until September 1996 Researcher at the Institute of Microelectronic and Microsystems of the Italian National Research Council (CNR-IMM former LAMEL) in Bologna with short term contracts. The short term contracts were supported by the CNR-LAMEL/ Olivetti Canon Industriale S.p.A.- BALTEADISK contract for the development of a monolithic silicon integrated circuit chip for a thermal ink jet printhead. After the prototype fabrication made at IMM-CNR the technological process moved to the factory for the production.

October 1984 until February 1994 Grant scholarships at the Institute of Microelectronic and Microsystems of the Italian National Research Council (CNR-IMM former LAMEL) in Bologna.
Contract professor at the University of Modena–Engineering Department during the academic year 1992/93: Physics I- Course for the “Diploma Universitario in Ingegneria Meccanica”.

JCR/ISI PEER REVIEWED PUBLICATIONS

More than 80 papers

CONFERENCE PARTECIPATION

Attending at 20 international conferences with posters or oral communications. Author or co-author of the proceedings at 25 international conferences.

PATENTS

Inventor in two Italian patents:

Patent N° *BO98A000594*

” Sensore a membrana sospesa in silicio poroso per il rilevamento di gas”

Patent N° *BO2006A000572*

” Processo di ossidazione di semiconduttori in carburo di silicio “

Inventor in two international patents:

Patent N° *PCT/IB2012053544*

” Method for making a silicon separation microcolumn for chromatography or gas chromatography”

Patent N° *RM2012A000311/ PCT29187*

”Thermal Conductivity Detector (TCD) for Fast Gas-Chromatographic (GC) Applications”

PRINCIPAL COLLABORATIONS

International Research Institutions CNRS-CEGELY, Lyon, France
CNM – CSIC, Barcelona, Spain
EADS Corporate Research Centre, Munich, Germany
Electronic Engineering Department- University of South Florida, Tampa
Physics Department/ Center for Materials Science and Nanotechnology-
University of Oslo, Oslo

Birck Nanotechnology Center- Purdue University- West Lafayette, Indiana
ACREO AB – Kista, Sweden
National Institute of Materials Physics - Bucurest, Romania

*National
Research
Institutions*

Physics Department -University of Bologna, Bologna
Dip. di Chimica Organica ed Industriale, Università di Parma, Parma
CRIM-Lab Scuola Superiore Sant'Anna, Pisa
FBK, Trento
Dipartimento di Ingegneria Elettronica DIEI- Università Perugia, Perugia
Dipartimento di Fisica- Università di Ferrara, Ferrara