

CV-RAFFAELLA LO NIGRO

Researcher unique identifiers:

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PE macrosectors: PE3, PE4, PE5

H index: 27 (WoS)

2039 CITATIONS (WoS)

140 PUBLICATIONS (WoS)

Profile: Chemistry PhD, Senior Scientist at CNR Istituto per la Microelettronica e Microsistemi (IMM-Ct), Italy, National habilitation for associated professor Chem 03(B1)

Ph.D. University of Catania Italy "Gamma ray induced processes of point defect conversion in silica" (2000)

Degree in Chemistry, full marks (110/110) cum laude, University of Catania, Italy (1996).

Research interests:

Fabrication of thin films by chemical vapour deposition methods such as MOCVD and ALD.

High-k dielectric (Al_2O_3 , HfO_2 , Pr_2O_3 , Sc_2O_3) and giant dielectric ($\text{CaCu}_3\text{Ti}_4\text{O}_{12}$) films;

Structural, morphological and electrical characterization

Microelectronics of Power devices.

Scientific activities:

- In charge of the research activity on "Multifunctional, nanostructured and innovative Materials".
- Responsible of the Deposition of dielectric thin films by Atomic Layer Deposition methods
- Publications in leading journals (Advanced Materials, Chemistry of Materials, Applied Physics Letters, J. Appl. Phys.). She is author of 4 book chapters and more than 140 ISI papers.
- Participation to international conferences
- Referee for Chem. Mater., APL, CVD and many other journals

Guest Editor:

- 2020 for the ISI international Journal 'NanoMaterials' MDPI, expected in June 2021

Scientific Employment:

2020-present, Senior Scientist, CNR, Istituto per la Microelettronica e Microsistemi, Headquarter Catania, Italy, 2001-2020, Researcher, CNR, Istituto per la Microelettronica e Microsistemi, Headquarter Catania, Italy, 2000-2001, Postdoctoral Fellowship, University of Catania, Italy, 1996-1999, PhD, Università di Catania, Italy,

Scientific supervisor role:

- Postdocs: 2018-present Dr. Emanuela Schilirò
 - Phd theses: Emanuela Schilirò (2017), Patrick Fiorenza (2007), Roberta Toro (2003).
- Master and bachelor theses: Over 15 undergraduate theses supervised since 2002

Management Tasks:

- Head of the 'Atomic Layer Deposition' at the Cleanroom of the IMM-CNR, within STMicroelectronics

Invited Conference Talks:

- 2017, EMN 3CG& Metallic glasses Meeting, Berlin, Germany
- 2013, EuroCVD 19 Congress, Varna, Bulgaria
- 2012, Collaborative Conference on Crystal Growth 2012, Orlando, Florida (USA)
- 2010, CIMTEC-12th International Ceramics Congress & 5th Forum on New Materials

- 2010 Nanotechday, Catania, Italy
- 2005 International European Science Fondation, Workshop on “rare earth oxide thin films: growth, characterization and applications, Sanremo, Italy

Invited Seminars:

- 2018 SENTECH’s seminar on “Plasma-Process-Technology“, Berlin, Germany

National and international projects awarded by competition:

She has been involved as “workpackage Leader” or “research activity leader” in several **national and EU projects** (PRISMA, FIRB, NUOTO, Graphic-RF, ENERGETIC).

National and international awards:

In 2009 he was awarded from CNR as “Best Young Scientists” for her research on Materials Science.

Chairman at conferences:

- 2017, EMN 3CG& Metallic glasses Meeting, Berlin, Germany
- 2013, EuroCVD 19 Congress, Varna, Bulgaria

Visiting scientist:

- December 2019 (1 week): Institute for Technical Physics and Materials Science, Hungarian Academy of Science - Budapest (Hungary), n the framework of the CNR-HAS agreement 2019-2021
- May 2019 (1 week), institute Wysokich Cisnien PAN, Warsaw (Poland) n the framework of the CNR-HAS agreement 2019-2021

Responsible of research Collaborations:

- since 2014 withSentech Gmhb
- since 2010 STMicroelectronics srl for the development of innovative dielectric for power devices.
- since 2001 with Chemistry Department of University of Catania.

Catania, 08/04/2021

