

Curriculum vitae of Antonio Aronne, University of Naples Federico II.

PERSONAL INFORMATION

Family name, First name: ARONNE, Antonio

Researcher unique identifiers ORCID: 0000-0002-2711-6789; Research ID: S-6623-2017;

Scopus Author ID: 7004261342

Date of birth:

Nationality:

URL for web site: www.docenti.unina.it/antonio.aronne

• EDUCATION

- 1990 PhD in Materials Engineering (Raw Materials and Metallurgy)
 Engineering Faculty, University of Rome “La Sapienza”, Italy
- 1985 Master Degree in Chemistry
 Science Faculty, University of Naples “Federico II”, Italy

• CURRENT POSITION

- 2012 – present Full professor of Chemical Fundamentals of Technologies
 Department of Chemical and Materials Engineering and Industrial Production, University of
 Naples “Federico II”, Italy

• PREVIOUS POSITIONS

- 2001 – 2012 Associate professor of Chemical Fundamentals of Technologies
 Department of Materials Engineering and Production, University of Naples “Federico II”,
 Italy
- 1990 – 2001 Assistant professor of Chemical Fundamentals of Technologies
 Engineering Faculty, University of Naples “Federico II”, Italy

• FELLOWSHIPS AND AWARDS

- 1990 Award A.I.C.A.T. “A. Lucci” received from Italian Association of Thermal Analysis and
 Calorimetry, Italy

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2005 – present **2** Postdocs/ **5** PhD/ **9** Master Students
 Faculty of Engineering, University of Naples “Federico II” / Italy

• TEACHING ACTIVITIES

- 1990 – present Professor – Chemistry, I level Master course in Chemical Engineering, Mechanical
 Engineering, Naval Engineering, Civil Engineering, Telecommunication Engineering,
 University of Naples “Federico II”, Italy

• REAEARCH ACTIVITY

The research activity ranks in the field of the synthesis of inorganic and hybrid organic-inorganic and bio-organic-inorganic amorphous materials with new functionalities. These materials are obtained using either sol-gel or melting and quenching of oxide mixtures developing innovative synthesis routes characterised by

a bottom up approach. The optimization of the procedure and of the type of synthesis is tailored to the specific application of the material.

Materials with a different degree of porosity, in the form of transparent thin films or powders, are obtained by sol-gel, which were used as sensors, heterogeneous catalysts, constituent elements of thin film photovoltaic cells.

Special glasses and glass-ceramics are obtained by melting and quenching of oxide mixtures to study the relationship between structural change at the nanoscale (nanostructuring) of the amorphous matrix and the non-linear optical properties, such as the second harmonic generation and the Raman amplification.

The results have been reported yet in **153** papers on international journals that have received to date more than **2521** total citations with an h-index of **28** (Scopus).

External Funding research:

2010 – 2016 Scientific Director of the Joint Research annual Projects between the Department of Chemical and Materials Engineering and Industrial Production, University of Naples “Federico II” and ENEA (National Agency for the New Technologies, the Energy and the Sustainable Economic Development) concerning the preparation of materials for innovative solar cells. Total funding received for these projects was ca. 274,000 Euros.

• **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2010 President of Organizing Committee of VII Italian Workshop of Sol-Gel / Italy
- 2017 Member of Scientific Committee of 9th International Symposium on Nano & Supramolecular Chemistry / Italy

• **INSTITUTIONAL RESPONSIBILITIES**

- 2006 – 2012 Member of the Doctoral School Committee in “Innovative Technologies for Materials, Sensors and Imaging”, University of Naples “Federico II” / Italy
- 2013 – present Member of the Doctoral School Committee in “Industrial Product and Process Engineering”, University of Naples “Federico II” / Italy

• **COMMISSIONS OF TRUST**

- 2005 – present Reviewer for *Journal of Sol-Gel Science and Technology*, *Journal of Solid State Chemistry*; *Chemistry of Materials*; *Material Chemistry*; *ACS Catalysis*; *Journal of Applied Catalysis A: General*; *Langmuir*.
- 2011 Co- Editor of the Special Issue “Sol-Gel R&D in Italy” of *Journal of Sol-Gel Science and Technology* (J Sol-Gel Sci Technol 60 (2011) 221).
- 2017 External referee of the research project “*In quest of a more efficient quantum solar energy exploitation in energy downhill and uphill photocatalytic processes*” submitted to Foundation of Polish Science (European Funds Smart Growth) / Poland.

• **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2012 – present Member, “*International Sol-Gel Society*”
- 2012 – present Member, “*National Interuniversity Consortium of Materials Science and Technology*”
- 2014 – present Member, “*Italian Chemical Society*”

• **MAJOR COLLABORATIONS**

Prof. **Vladimir N. Sigaev**, **38** papers on synthesis and characterization of special optical glasses, Mendeleev University of Chemical Technology / Russia; Dr. **Nigel J. Clayden**, **12** papers on solid state NMR characterization of glasses and gel-derived materials, School of Chemistry, University of East Anglia / United Kingdom; Prof. **Alessandro Vergara**, **8** papers on Raman characterization of glasses and gel-derived materials, Università di Napoli

“Federico II”. Prof. **Martino Di Sergio**, 7 (Università di Napoli “Federico II”) and Prof. **Antonella Gervasini** 4 (Università di Milano) papers on catalytic performances of gel-derived catalysts in reaction for green chemistry. Prof. **Antonella Rossi** 4 papers on synthesis and characterization of semiconducting oxides (Università di Cagliari and ETH of Zurich).