

Prof. Dr Placido Mineo

Curriculum Vitae

Education:

- Degree in Chemistry, University of Messina
- PhD in “Polymeric Materials for Special Uses”, University of Catania
- Qualification to the Chemical Profession

Current appointment:

- Coordinator of the Bachelor course in “Industrial Chemistry”, University of Catania
- Full Professor of Industrial Chemistry - Department of Chemical Science, University of Catania.
- Head of the Polymer Laboratory of the University of Catania
- Steering Committee member of the PhD course in Science of Materials and Nanotechnologies, University of Catania

Previous appointments:

- Associate Professor of Industrial Chemistry - Department of Chemical Science, University of Catania.
- Assistant Professor - Department of Chemical Science, University of Catania
- Steering Committee member of the PhD course in Materials and Technology Innovation in engineering and architecture – University of Catania

Research activity in other Institutions:

- Associate Researcher in the Institute for Chemical-Physical Processes - Italian Research Council.
- Associate Researcher in the Institute for Polymers, Composites and Biomaterial, - Italian Research Council.

Teaching activity:

- 2003-2011: “Chemical Physics” - University of Catania
- 2006: “Polymeric Materials” - Institute of Chemistry and Technology of Polymers – Italian National Research Council
- 2007: “Mass spectrometry, NMR spectroscopy, FT-IR spectroscopy and GPC of Polymers” – Project “Plast-Ics” – ST Microelectronics
- 2007-2010: " Chemical and Food Industry Technologies "– University of Catania
- 2006-2014: “Industrial Chemistry” – University of Catania
- since 2014: “Fundamentals of Polymer Chemistry ” – University of Catania
- since 2014: “Industrial Chemistry Technology” - University of Catania
- since 2016: “Macromolecular Chemistry” - University of Catania
- since 2017: “Functional Polymers” - University of Catania
- since 2019: “Advanced Polymers” - University of Catania

Dissertation advisor:

- * Doctoral supervisor of four PhD theses - Department of Chemical Sciences, University of Catania
- * Adviser of 36 Degree thesis - Department of Chemical Sciences, University of Catania
- * 2006-2011: Teacher/Tutor of the “Scuola Superiore” of University of Catania

Responsible for the research activity of research grants:

- Dr Giovanni Marco Carnemolla, "Synthesis and structural characterization of biodegradable and biocompatible copolymers and terpolymers"
- Dr Giovanni Amato, "Synthesis and structural and functional characterization of macromolecular systems able to the molecular recognition"

National Scientific Qualification:

Full Professor in Chemical Foundations of Technologies, 03/B2 (CHIM/07)

Full Professor in Industrial Chemistry, 03/C2 (CHIM/04)

Bibliometric indicators related to publications (Web of Science):

- 148 research papers
- Hirsch Index (H-Index): 34
- Sum of the Times Cited: 3355

Other output:

- 2 patents
- 2 Chapter of Book

Meeting communications:

104 oral and poster communications

Persistent digital identifier:

Researcher ID C-1415-2008: <http://www.researcherid.com/rid/C-1415-2008>

ORCID iD 0000-0003-3382-9272: <http://orcid.org/0000-0003-3382-9272>

Scientific Network:

Researchgate: http://www.researchgate.net/profile/Placido_Mineo

Congress Organization - Active Member :

- 1999: "Workshop on Mass Spectrometry of Polymers" - European Polymer Federation - Catania (1-3 December 1999)
- 2007: " XVIII Italian Conference of Science and Technology of Macromolecules" - Catania, 16 – 20 September 2007
- 2018: " XXIII Italian Conference of Science and Technology of Macromolecules" - Catania, 9 – 12 September 2018

Organization of local scientific dissemination activities:

- since 2009, Week of the Scientific Culture - Chemistry section
- since 2014, Open Day - the University open the doors of the Department of Chemical Sciences to the high school students
- 2015, Euraxess Roadshow (stop in Catania) - is a pan-European initiative providing access to a complete range of information and support services to researchers wishing to pursue their research careers in Europe.

Research Project (a member of the unit):

- 2006-2009: Project "PLAST-Ics" – Catania Ricerche and ST-Microelectronics

- 2006-2010: NATO Project “Organic Optical and Electronic Sensors: Sniffing Out Chemicals” (SPF 981964).
- 2009-2012: Project “New Porphyrins as Chirogenetic Probes to Recognition of Peptides and Proteins of Biological Interest” - PRIN 2008

Coordination of research projects:

- Since 2020, Principal Investigator of Project "Materiali e Metodologie chimico-fisiche avanzate per l'abbattimento di contaminanti Xenobiotici", financed by University of Catania

- 2015-2017, Principal Investigator of project FIR2014 with title “Agenti teranostici a base di porfirinoidi” (codice progetto: 48C43B), financed by University of Catania

- 2011-2020, Responsible of the research unit for Project DIATEME (PON01_00074) "High technology devices for biomedical applications" - Operative National Program " Research and Competitiveness", Ministry of Education, Universities and Research:

Regarding the activity “Development of oligomeric systems based on porphyrinic systems capable of interacting with molecular systems of biological interest”, the project has had as objective the study of the applicability of some water-soluble porphyrin systems in the recognition and/or complexation of molecular species of biological interest. Initially, some previously synthesized porphyrin compounds have been tested to form host/guest complex with several drugs having different pharmacological activity and/or size. On the obtained results, new porphyrin systems with better properties have been prepared and tried as new "molecular sensors" and/or "molecular-finders". The research now is in the testing stage of the ability toward complexing active drugs, the activity carried out with the collaboration of a partner company of the project.

The research resulted in eleven papers published in international journals and several scientific presentations at national and international congresses.

- 2009-2012, vice-responsible of a research unit - Project “New Porphyrins as Chirogenetic Probes to Recognition of Peptides and Proteins of Biological Interest” - PRIN 2008:

The Project had as objective the use of porphyrin compounds in medical areas such as the treatment of neoplastic diseases, diagnostic for image and the qualitative and quantitative determination of important biological compounds. Generally, the strong hydrophobic nature of the porphyrin unit greatly limits its use in an aqueous environment. In some applications, this limitation has been overcome by the introduction of some electrically charged units in the porphyrin ring. But this expedient does not guarantee the permanence of molecules in solution (for the possible formation of macro-aggregates) and often these electric charges make porphyrin compounds unable to cross cell walls.

The objective of this PRIN project was then the synthesis of new water-soluble porphyrin compounds devoid of electric charges, able of interacting with molecular systems of biological interest. This interdisciplinary work involved the activities of two groups: the group of the University of Catania, which was responsible for the synthesis and chemical characterization of pertinent water-soluble porphyrin products and the CNR-IPCF institute which studied the physico-chemical and functional properties of these products.

The research resulted in twelve papers published in international journals, one patent and several scientific presentations at national and international congresses.

Research interests:

- Synthesis of synthetic functional polymers (containing graphene oxide, fullerene, porphyrin, metal complexes, etc.)
- Structural characterization of polymers by MALDI-TOF and NMR techniques

- Thermal characterization of polymers
- Synthesis and structural characterization of water-soluble porphyrins and its metal complexes
- Functional characterization of water-soluble porphyrins and its metal complexes as bio-molecular sensors
- Synthesis of organic/inorganic hybrids systems

Member of editorial boards:

- Open Journal of Polymer Chemistry (Scientific Research Publishing)
- Journal of Chemistry (Hindawi Publishing Corporation)
- Scienze e Ricerche (ISSN 2283-5873)
- Nanomaterials (MDPI)

Professional Society Membership:

- Associazione Italiana Macromolecole (AIM)
- American Chemical Society (ACS)
- Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (INSTM)
- Società Chimica Italiana (SCI)
- American Nano Society (ANS)

Refereeing Activities for University and Research Institutes:

- Referee of projects “Futuro in Ricerca 2013” - Ministry of Education, Universities and Research
- Referee for a tenure track, Al-Hussein Bin Talal University – Amman, Jordan
- Referee research project, National Research Council - Romanian Government

Refereeing Activities for international journals:

- Journal of the American Chemical Society (ACS)
- Journal of Applied Polymer Science (Wiley Ed.)
- Chemistry-A European Journal (Wiley Ed.)
- Polymer International (Wiley Ed.)
- Rapid Communications in Mass Spectrometry (Wiley Ed.)
- Macromolecules (ACS)
- Journal of Thermal Analysis and Calorimetry (Springer ed.)
- Journal of Physical Chemistry (ACS)
- Dyes and Pigments (Elsevier)
- Journal of Molecular Structure (Elsevier)
- Journal of Polymer Engineering (De Gruyter Ed.)
- Letters in Organic Chemistry (Bentham Science Ed.)
- Journal of Luminescence (Elsevier)

WEB addresses:

Web page istituzionale: <http://www.dsc.unict.it/docenti/placido.mineo>

Researchgate: http://www.researchgate.net/profile/Placido_Mineo

Researcher ID C-1415-2008: <http://www.researcherid.com/rid/C-1415-2008>

ORCID ID 0000-0003-3382-9272: <http://orcid.org/0000-0003-3382-9272>

Google Scholar: <https://scholar.google.it/citations?user=r8KQ8ycAAAAJ&hl=it>

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