



Maria Rosaria Tiné

Professor of Physical Chemistry at University of Pisa (Italy)

Personal Information

First name and surname	Maria Rosaria Tiné
Date of birth	(omissis)
Place of birth	(omissis)
Gender	Female
Status	(omissis)
Nationality	Italian
Home address	(omissis)
Institutional address	Dipartimento di Chimica e Chimica Industriale Università di Pisa Via G. Moruzzi 13, 56124 Pisa, Italy
E-mail addresses	mariarosaria.tine@unipi.it (omissis)
Phone numbers	(omissis) +39 050 2219268
Fax number	+39 050 2219260
Personal website	https://www.dcci.unipi.it/maria-rosaria-tine.html

Present Position

- ❖ Associate professor of Physical Chemistry at University of Pisa (since 1992), endowed with national scientific habilitation to full professorship in Physical Chemistry (since 2013, confirmed in 2016)
- ❖ Director of THERMOLAB – Laboratory of Chemical Thermodynamics and Calorimetry at Department of Chemistry and Industrial Chemistry of University of Pisa (since 1998)
- ❖ Italian Representative in the Steering Committee of ESTAC – European Society of Thermal Analysis and Calorimetry (since 2007)
- ❖ President of Quality Assurance Committee (Nucleo di valutazione) at University of Genova (since 2019)
- ❖ Member of the Steering Committee of Tuscan Platform on Technologies, Cultural Heritage and Culture (since 2015)
- ❖ Past president of Tuscan Section of Italian Chemical Society (since 2017) and, previously, Vice-President (2014-2016)



Academic Career

- 1992-2019 ❖ Associate professor of Physical Chemistry (University of Pisa)
- 1981-1992 ❖ Assistant professor of Physical Chemistry (University of Pisa)
- 1986, 1987, 1989 ❖ Visiting Scientist at Institut de Topologie et Dynamique des Systèmes (University of Paris VII)
- 1978-1981 ❖ Post-graduate researcher (University of Pisa)
- 1977 ❖ Full Honors degree in Chemistry (University of Pisa)

Teaching Activity

- ❖ At the present and in the past at the University of Pisa: Physical Chemistry; Biophysical Chemistry
- ❖ In the past at University of Pisa: Laboratory of Physical Chemistry
- ❖ In the past at Scuola Normale Superiore di Pisa: Physical Chemistry

Bibliometric Indicators (from ISI WOS and Elsevier Scopus)

- ❖ Number of scientific publications = 130
 - In the last 5 years = 28
 - In the last 10 years = 55
- ❖ Total citations = 2323
 - In the last 15 years = 1884
- ❖ H index = 26
 - In the last 15 years = 22

Scientific and Professional Career Past Positions

- 2011-2019 ❖ Member of National University Council (CUN), as elected representative of associate professors of chemistry.
In this position, she was:
Coordinator of the Assessment, Quality, and Internationalization Policies Committee of CUN (2015-2019)
Vice-Coordinator of the same Committee with mandate to PhD Programs (2011-2015)
Member of the joint working group CUN-CRUI (Italian Conference of Rectors) on Open Access Policies
- 2016-2019 ❖ Member of Board of Directors of University "Federico II" of Naples
- 2007-2017 ❖ Member of Board of PhD Program in Chemistry and Materials Science of University of Pisa (2012-2017)
Member of Board of PhD Program in Chemistry of University of Pisa (2009-2013)
Member of Board of PhD Program in Biomaterials of University of Pisa (2007-2015) and Coordinator of the same Board (2011-2012)
Vice-President and Coordinator of Teaching Activities of PhD School in Biomolecular Sciences (BIOS) of University of Pisa (2011-2012)

2013-2017	<ul style="list-style-type: none"> ❖ Associate member of Pisa Research Unit of CNR-INO (National Institut of Optics of National Research Council) ❖ Associate member of Pisa Research Unit of CNR-ICCOM (Institute of Chemistry of Organometallic Compounds of National Research Council) <p>Responsible of ICCOM Research Sub-project PM.P07.015.001 (Physical-Chemical Methodologies for Characterization of Systems and Processes in Cultural Heritage) of the Research Project “Experimental and Theoretical Methodologies for Not-Invasive Diagnostics”</p>
2015-2016	<ul style="list-style-type: none"> ❖ Vice-President of the Joint Council of Bachelor and Master Degrees in Chemical Sciences of University of Pisa
2012-2015	<ul style="list-style-type: none"> ❖ Member of the Steering Committee of Tuscan Technological District of Cultural Heritage and Sustainable City <p>Delegate of University of Pisa in Management Committee of POLIS Tuscan Innovation Center for Sustainable City Technologies</p> <p>Delegate of University of Pisa in POLIS Coordination Team of Coastal Tuscany for Cultural Heritage</p>
2010-2013	<ul style="list-style-type: none"> ❖ Treasurer and Member of the Council of Physical Chemistry Division of SCI - Italian Chemical Society (2010-2012) <p>Member of SCI Committee for the Interdivisional Groups (2010-2012)</p> <p>Member of the SCI working group on REACH (Registration, Evaluation, Authorization and Restriction of Chemicals 1907/2006/EC) implementation and member of the Italian working group on QSAR methods for REACH coordinated by Ministry of Health, ISS (Istituto Superiore di Sanità) and Pharmacological Researches Institute “Mario Negri”</p>
2002-2007	<ul style="list-style-type: none"> ❖ President of AICAT (Italian Association of Calorimetry and Thermal Analysis) and Member of Board of MEDICTA (Group of Calorimetry and Thermal Analysis Association of Mediterranean Countries)

Research Field

Characterization of physical-chemical properties of chemical and biochemical systems and on the thermodynamic kinetic and calorimetric investigation of chemical processes

Research Subjects

BIOPHYSICAL CHEMISTRY

- ❖ Thermodynamics, calorimetry and kinetics of molecular interactions, folding, and self-organizing and on physical chemistry of self-assembly systems, for biomedical applications
- ❖ Halloysite nanotubes loaded with bioactive substances, proteins and metal nanoparticles for smart materials

GREEN CHEMISTRY

- ❖ MW assisted extraction and characterization of essential oils and valuable molecules from plants and agricultural feedstock and MW assisted synthesis and characterization of nanoparticles for biomedical applications
- ❖ Predictive models of toxicity of substances

PHYSICAL CHEMISTRY FOR
CULTURAL HERITAGE

- ❖ Ageing and degradation processes of materials (oils, proteins, pigments, organic, inorganic synthetic resins, geopolymers) in archeologic and cultural heritage manufactures.

PREDICTIVE MODELS

- ❖ Predictive models of the chemical-physical properties and toxicity of substances, in particular of solubility and repartition of organic molecules mono- and poly-functional in different solvents, both by QSAR/QSPR analysis based on group contribution and by a new method based on a recursive neural network able to consider structured domains as input data

METAL COMPLEXES

- ❖ Thermodynamics and kinetics of the formation of metal complexes in aqueous solution and of their reactivity toward small molecules and substrates, focusing on the synthetic carriers and activators of oxygen and on the interaction of metal receptors with dioxygen and CO
- ❖ Thermodynamics and kinetics of the interaction of DNA with metal receptors, focusing on the intercalation processes
- ❖ Extraction/recovery of specific metal ions by micellar systems

ORGANIC MIXTURES

- ❖ Thermodynamics of organic mixtures and solutions and their properties (free energy, volume and enthalpy in excess)
- ❖ Collaboration with the international program TOM (systematic collection and critical revision of experimental mixing properties) focusing on improvement and parametrization of a quasi-chemical model DISQUAC for the prediction of mixing properties

CALORIMETRIC TECHNIQUES

- ❖ Diffusion and improvement of integrated calorimetric techniques for the characterization of complex materials
- ❖ Project of a low-cost multimode calorimeter (international patent)

Collaborators
PhD students

THERMOLAB STAFF

Celia Duce, Associate Professor
Luca Bernazzani, Assistant Professor
Rita Carosi, Technician
Elena Pulidori, Technician
Chiara Pelosi, PostDoc Researcher
Silvia Pizzimenti, PhD Student

PhD STUDENTS

Celia Duce (2005)
Lisa Ghezzi (2008)
Carlo Bertinetto (2010)
Alessio Spepi (2013)
Chiara Pelosi
Elena Pulidori

Research Grants

- 2018 Progetto di ricerca industriale e sviluppo sperimentale PNR 2015-2020 Area di Specializzazione CULTURAL HERITAGE
AGM for CuHe: Advanced Green Materials for Cultural Heritage.
CUP E66C18000380005
Coordinator of the Local Unity (36 months)
- 2012 PRIN 2010-2011: Nanoscale Functional Organization of (Bio)Molecules and Hybrids for Targeted Application in Sensing, Medicine and Biotechnology
Coordinator of the Local Unity (36 months)
- 2006 Fondazione Cassa di Risparmio di Pisa 2006: Disegno, sintesi e caratterizzazione di nuovi materiali auto-assemblanti per applicazioni biomediche
Principal investigator (24 months)
- 2002 PRIN 2002: Metal receptors for activation and transport of dioxygen, small molecules and biosubstrates.
Coordinator of the Local Unity (24 months)
- 2000 PRIN 2000: Molecular systems and metal-receptors for the activation and transport of dioxygen, nitrogen dioxide and biosubstrates
Coordinator of the Local Unity (24 months)
- 1998 PRIN 1998: Thermodynamic and kinetic studies on molecular systems for oxygen transport and activation
Coordinator of the Local Unity (24 months)

Editorial Activity

- ❖ Member of Advisory Committee of the journal "Conservation Science in Cultural Heritage" (since 2014)
- ❖ Guest Editor of Journal of Thermal Analysis and Calorimetry (2019) Special Issue
- ❖ Guest Editor of Journal of Thermal Analysis and Calorimetry (2009) Special Issue

Conferences, Reviews, Talks

INVITED REVIEWS

- 2012 ❖ Cobalt Complexes in Aqueous Solutions as Dioxygen Carriers, in COORDINATION CHEMISTRY REVIEWS, vol. 256, pp. 316-327, 2012

INVITED SCIENTIFIC TALKS

- ❖ SCI 2017, XXVI Congresso Nazionale della Società Chimica Italiana, Peastum, 10-14 Settembre 2017 Plenary Conference
- ❖ AICAT 2016, XXXVIII National Congress on Calorimetry, Thermal Analysis and Applied Thermodynamics, Ischia, Italy; September 25-28, 2016. Plenary Conference

CONFERENCES CHAIRS

- ❖ Calorimetry Conference, Calorimetry Conference, CALCON 2014 Santa Fe, New Mexico, USA, July 6 – 10, 2014. Plenary Conference
- ❖ Workshop on Cultural Heritage "A New Playground for Molecular Modeling", Scuola Normale, Pisa, 15 novembre 2011, Plenary Conference
- ❖ X Mediterranean Conference on Calorimetry and Thermal Analysis, MEDICTA, Porto, Portugal, July 24, 2011, Plenary Conference
- 2018 ❖ AICAT-2018, XL National Congress on Calorimetry, Thermal Analysis and Applied Thermodynamics, Pisa, December 17-19 2018. Chairperson
- 2016 ❖ Workshop "Etica e Sperimentazioni Scientifiche". Università di Pisa, 22-23 gennaio 2016
- 2011 ❖ "Chimica è, Chimica e" Lecture Series, International Year of Chemistry, 2011, SNS, Pisa (Co-chair)
- 2008 ❖ AICAT-2008, XL National Congress on Calorimetry, Thermal Analysis and Applied Thermodynamics, Pisa, December 4-8 2008. Chairperson
- 2013 ❖

Scientific Papers and Products

https://arpi.unipi.it/browse?type=author&authority=rp11984&sort_by=2&order=DESC#.XSw45K1aaCQ

Update on February 3rd, 2022

TINE' Maria Rosaria