

Finizia Auriemma was born on [REDACTED]. She is Full Professor of Macromolecular and Industrial Chemistry at the University of Napoli Federico II. She obtained the degree in Chemistry (Summa cum Laude) in 1984, and the PhD in Chemistry in 1989 at the University of Napoli Federico II under the supervision of Prof. Paolo Corradini.

She became Assistant Professor in Inorganic Chemistry in 1990 and in Macromolecular and Industrial Chemistry in 1994. She became Associate Professor in Macromolecular and Industrial Chemistry in 2002.

She has spent several periods of research abroad, as Visiting Scientist at Max-Planck-Institut für Polymer Forshung, Mainz, Germany (1989, 3 months and 1994/95 10 months), as visiting professor at Institute Charles Sadron in Strasbourg, France (1997, 1 month); Laboratoire de Physique des Solides, Université Paris-Sud, Orsay, France (2001, 1 month); and the Department of Physics, University of Reading, Reading, UK (2006, 1 month).

She has performed short time visits abroad (for less than 1 week), holding seminars on invitation, at several research institutions, namely the Laboratoire de Recherche sur les Polymères, CNRS-LRP, Thiais France (2001); Polytechnic University Brooklyn, NY (2003); University of Akron (2003); Cornell University, Ithaca (2003); Department of Engineering Materials, University of Sheffield (2006); DSM Ahead, Geleen, The Netherlands (2013); ILL Grenoble, France (2013); Laboratoire Polymères et Matériaux Avancés CNRS/Solvay, Saint-Fons, France (2014).

She is recipient of the Italian Prize for the Chemical Science awarded by the "Accademia di Scienze Fisiche e Matematiche" (1995); the final prize for the researches performed in Mainz awarded by the Consiglio Nazionale delle Ricerche (C.N.R., 1995); two research incentives UNA TANTUM for the three years 2008-2010 and 2010-2012.

Prof. Auriemma teaches both undergraduate and graduate courses in Polymer and Material Science, namely Macromolecular Chemistry II course, Laboratory of Material Science (from 1995 to 2019), Structure and Properties of Polymers for the undergraduate students of Industrial Chemistry and a short course for Ph.D students "Structural analysis of materials at nanoscale through Small Angle X-ray Scattering methods". She carries out an intensive activity as supervisor and/or tutor of undergraduate students of Chemistry and Industrial Chemistry for the Bachelor and Master theses and of graduate student for the Ph.D. thesis. She was part of an international academic board for the final Ph. D. examination at Université Paris XII-Val de Marne (June 2004), Eindhoven University of Technology, Eindhoven, Netherlands (september 2013), INSA-LYON MATEIS, Villeurbanne, Francia (march 2015), ESPCI, Paris, France (July, 2019).

She is referee of international journals like Journal of the American Chemical Society, Macromolecules, Chrystal Growth & Design, Journal of Physical Chemistry B and C, Chemistry of Materials, Biomacromolecules, Polymer, Macromolecular Chemistry and Physics, Macromolecular Rapid Communications, Journal of Polymer Science B, Journal of Applied Polymer Science, European Polymer Journal and many others.

She is author of about 240 papers published in international peer reviewed scientific journals (H index=51, citations = 7839), of about 300 communications at international conferences, 3 patents. These papers have been published in the most prestigious chemistry and macromolecular journal. In particular, almost half of papers have been published in Macromolecules, 6 in Journal of the American Chemical Society, 4 in Chemistry of Materials, 3 in Journal of Chemical Physics B, 3 in Advanced Materials, 6 in Angwandte Chemie Int. Ed., 1 in Physical Review Letter; 1 in Journal of Applied Crystallography; 7 review articles are published in Advances Polymer Science, Progress in Polymer Science, Lecture Notes in Physics, Accounts of Chemical Research, Polymer Chemistry (Royal Society); she is co-author (with Prof. Claudio De Rosa) of a monographic text-book "Crystal and Crystallinity in Polymeric Materials". She is also co-authors of numerous chapter books (about 10). She has built the Academic spin-off PLASTEL.

From the 2018 to date she is Coordinator of the Master Course "Science and Technology of Industrial Chemistry" at the University of Napoli Federico II.

From the 2004 to the 2009 she is member of "Commissione di Tutorato", "Commissione Paritetica" and "Commissione Didattica", Faculty of Science MM.FF.NN., Università di Napoli Federico. Since the 2013 she is member of the Academic Board of PhD Course in Chemical Science, Università di Napoli Federico II.

Her research activity namely consists in the study of the relationships between the molecular structure and physical properties of semicrystalline polymeric materials, using theoretical and experimental approaches. Significant results have been achieved in the study of partially disordered macromolecular systems through the theoretical development of algorithms for the prediction of phase transitions based on statistical mechanics and of the diffraction patterns of these systems (Diffraction Modeling Method). The theoretical approach is accomplished by experimental studies performed using X-ray, electrons and neutron diffraction, electron microscopy, solid state Nuclear Magnetic Resonance, mechanical and thermal analysis of polymeric materials, measurement of viscoelastic properties. She also develops time-resolving techniques for in situ study of stress-induced phase transitions of polymers and polymer crystallization using synchrotron light sources and neutron scattering. She also studies the structure of heterogeneous catalyst systems used in Ziegler-Natta polymerization catalysis, the mechanisms which govern the formation of polymer gels, and the crystallization and polymorphic transformations of polymers in quiescent and non-quiescent conditions. She has extended her research interests to fundamental studies of self-assembly and confined crystallization in polyolefin block copolymers obtained using metallorganic catalysts, for their potential in many advanced technologies including their use as template for integrated circuits, photonic crystals for the confinement of light, electronic and microfluidic application, sensing and bio-sensing.

Prof. Auriemma has been co-worker of Prof. Paolo Corradini since 1984, up to his decease in the 2006. Prof. Auriemma has established several national and international collaborations with outstanding scientists of Academy and Industry, namely Prof. Hans Wolfgang Spiess director of the Max-Planck-Institut für Polymer Forshung, Mainz, Germany, for solid state NMR analysis of the dynamics and local structure of polymers, Prof. Bernard Lotz at Institute Charles Sadron in Strasbourg, France for electron diffraction and microscopy of polymer single crystals; Prof. Geoffrey R. Mitchell at Department of Physics, University of Reading, Reading, UK and now at Centre for Rapid and Sustainable Product Development, a Coordinator Investigator at the Polytechnic Institute of Leiria for the studies on polymer crystallization in non-quiescent conditions; Prof. Geoffrey W. Coates at the Department of Chemistry and Chemical Biology, Cornell University, Baker Lab, Ithaca, USA for the studies of stereoregular polymers prepared with metalorganic catalysts and new semicrystalline polymer from renewable resources; Dr. Luigi Resconi at Borealis, Linz, Austria for the studies of stereo- and regio-irregular polyolefins.

The studies performed by Prof. Auriemma to date have been largely funded by national research agencies including PRIN 1998, 2000, 2002 and 2004, Cluster C26; Regional programs as Centro di Competenze "Nuove Tecnologie per le Attività Produttive" Regione Campania P.O.R. 2000-2006 Misura 3.16; Project "HORIZON 2020" PON I&C 2014-2020, Fondo per la Crescita Sostenibile "Sviluppo di innovativi film plastici adesivizzati e stampabili ad alta sostenibilità ambientale ed elevate caratteristiche di stabilità, bagnabilità ed adesione per la protezione di superfici nobili; COST P12 project "Structuring of Polymers" FP7 CSA project number 218331, "NaPolyNet - Setting up research-intensive clusters across the EU". She has established collaborations with several leading industries namely: Lyondell-Basell Polyolefins, in Ferrara; Bridgestone; STMicroelectronics, BluPlast, Procter&Gamble, ITT Inc. Corporation; Unilever; Lamberti Group; ARLANXEO Advanced Elastomers; Nestlé. She has been project leader of competitive scientific research projects including AXIA "New Polymeric Materials for the rigid and flexible packaging of food" (2009-2011); Faro Project on nanotechnologies (2013-2014); Cariplo project on crystalline elastomers (2014-2015). Currently she is project leader of two projects funded by the Dutch Polymer Institute (DPI): 1) An Interdisciplinary high-throughput approach to olefin block copolymers (HT-OBC, DPI:

Project #817)" and 2) DPI Project #847; A microstructural insight in polyethylene based bioriented mono-materials: from fundamental to processing (PER-MANENT, DPI: Project #840).

She has organized the following scientific meetings: 2010: Leading Organizer of the workshop "New Paradigms in science and technology of food packaging", Napoli, 21st January. Member of the Scientific Committee of the final Congress for the COST P12 project "Structuring of Polymers"; FP7 CSA project number 218331, Pozzuoli, 2-4 March 2011; the Workshop "Natta's Seeds Grow. From the crystallography and modeling of stereoregular polymers to the challenges of complex systems", Milano, 21-22 November 2013; the Workshop "Recent advances and new perspectives in polymer crystallization", Genova, 29-30 Settembre 2014, Genova; Congress Mipol 2021 (in itinere).

She has been members of several commissions including: 2017 to date Scientific evaluator of PhD project for the Belgian "Research Foundation – Flanders (FWO); Scientific evaluator of research proposals for the funding agencies H2020, within the FETOPEN RIA programs, the NATIONAL SCIENCE CENTRE (NSC, Poland), and the French National Research Agency (ANR, France).

She has delivered several key note and plenary lectures including: 1) XXXV Congresso nazionale dell' Associazione Italiana di Cristallografia, 18-21 Settembre 2006, Ferrara; 2) COST P12 Workshop, X-ray Studies of Polymer Crystallization, 23-25 October 2006, Oxfordshire, UK.; 3) 41st IUPAC World Chemistry Congress "Chemistry Protecting Health, Natural Environment and Cultural Heritage" Torino, August 5-10, 2007; 4) XVth International Congress on Rheology, August 3-8, 2008 Monterey, CA; 5) Giornata di Studio e Approfondimento sulle bioplastiche e tecnologie ecocompatibili per imbottigliamento ed imballaggio delle acque minerali, 19 novembre 2008, Napoli; 6) XXXVIII Congresso nazionale dell' Associazione Italiana di Cristallografia, 20 - 23 September 2009; 7) International Workshop "Polymer Crystallization under Conditions Relevant to Processing" Genova, Italy, May 27- 28, 2010; 8) European workshop on polymer crystallization under conditions relevant to processing, Genova, June 21-22, 2012; 9) XLI Congresso nazionale dell' Associazione Italiana di Cristallografia, 11-14 Settembre 2012, Verona; 10) Solvay Conference "Macromolecules in Constrained Environment 24-29 March 2013, Les Houches, France; 11) Mipol 2018 14-15 February, Milano; 12) Mipol 2020 15-17 June, Milano; 13) APS March Meeting 2018, Boston; 14) Plenary lecture at European Polymer Congress 2019 (EPF 2019), 9-14 June, Crete.