PALLAVICINI Piersandro (Vigevano, 04.09.1962)
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EDUCATION

1986 "Laurea" degree in Chemistry,e Università di Pavia, 110/110 cum Laude.
Thesis:«Amminoetilcyclam: sintesi e proprietà di un tetraaza macrociclo con braccio coordinante» prof. Luigi Fabbrizzi as a supervisor.

1990 PhD in Chemistry, Scuola Normale Superiore, Pisa. Thesis: «Synthesis and reactivity of group 4 organometallic compounds» supervisor prof. Fausto Calderazzo, 70/70 cum Laude

WORK

2017-current Professore Ordinario (Full Professor), Department of Chemistry, University of Pavia
2010-2016: Professore Asssociato (Associate Professor), Department of Chemistry, University of Pavia
1994-2010: Ricercatore (Researcher), Department of Chemistry, University of Pavia
1991-1994 Technical Assistent, Department of Chemistry, University of Pavia.

RESEARCH

More recent interests (2005-on): inorganic chemistry and coordination chemistry to the nanoscale, including surface modification, inorganic nanoparticles, and nano-sized containers for self-assembled supramolecular systems. The attention is focused on the attainment of antimicrobic materials, on nanoparticles for drug delivery, on nanoparticles with photothermal properties for biomedical, energetic and anticounterfeit use. In detail: modification of inorganic surfaces with covalently grafted metal complexes (Cu^{2+}, Ag^{+}) and ligands, for antibacterial applications; synthesis of silver and gold nanoparticles and their functional coating (biocompatible coatings of silver NP, their use as microbicidal materials, synthesis of shape- and dimension-controlled non-spherical Au NP, use of the latter for drug loading and delivering); formation of monolayers of Ag or Au NP on bulk inorganic surfaces, with detailed studies of their antibacterial applications; photothermal and luminescent properties of Au and Ag non-spherical NP and of their monolayers on bulk materials; multi-action antibacterial materials (photothermal + chemical) made of nanoparticles dispersed in natural polymeric materials; photothermal inkjet printable nanoinks for secure writing, Cu^{2+} and Ag^{+} releasing polymeric films for smart packaging; standardization of characterization procedures for nano-vectors for the RNA delivery

SECURED GRANTS (as principal investigator or research unit coordinator)

2003-2004: Local coordinator, Pavia unit, PRIN 2003 (cofin MIUR) "Molecular functional systems covalently grafted on oriented silicon surfaces: surface derivatisation, characterisation and properties study". The local (Pavia) unit had a program with the title: "Syntesis of molecules and nanoparticles suitable for the preparation of Silicon bi- and tri-stable surgaces or of Si surfaces working as electrochemical and fluorescent sensors, with physical-optical characterization ".

2005-2007: Local coordinator, Pavia unit, PRIN 2005 (cofin MIUR): "Functionalisation of Si surfaces with electroactive molecular monolayers: theortical models and experimental aspectsi: modelli teorici e aspetti sperimentali". The local (Pavia) unit had a program with the title: "Synthesis and study of ligands for transition metal cations and kinetically inert coordination complexes suitable for forming covalently grafted monolayers on Si (100) e (111) and capable of behaving as receptors, sensors, redox centers and cation translocators, and physical-optical characterization of such materials".

2007 Italian coordinator: "Università Italo-Francese", "Galileo" project, in collaboration with LIMSAG de l'Universitè de Bourgogne (Francia) for the project "Segnalazione tramite fluorescenza ed estrazione di cationi metallici da parte di leganti macrociclici incorporati in micelle" 5000 euro

2007-2010 Principal investigator: Fondazione Cariplo: "Glass surfaces with antimicrobial action based on the tunabled release of metal cation: a wide-spectrum study on the use of surface coordination chemistry and monolayers of modified nanoparticles to prepare smart materials of biomedical interest"[project #2007-5183]) 350.000 euro

2010-2013 Principal Investigator: Fondazione Cariplo: “Gold nanorods (NR) and asymmetic nanoparticles coated with biocompatible polymers with binding functions for molecules and metal cations: antimicrobial action of pharmacological and thermal nature, activated by NearIR irradiation"[project #2010-0454] 400.000 euro
2012-2016 local coordinator, Pavia unit, PRIN 2010-11 project "Indentification of optimal release systems for Nucleic Acid Based Drugs and study of the action mechanisms in some models of inflammatory and tumoral human pathologies" (project 20109PLMH2_003) 150.000 euro
2017-2019 Principal Investigator: University of Pavia Blue Sky Research “Photothermally responsive inks for inkjet-printing secure informations” (project BSR1774514) 60.000 euro
2022-2025: granted within Centro Nazionale “National Center for Gene Therapy and Drugs based on RNA Technology”- tematica “Sviluppo di terapia genica e farmaci con tecnologia a RNA”, PNRR Missione 4, Componente 2, Investimento 1.4 (Codice progetto MUR: CN00000041) 50.000 euro

PhD AND POST-DOC TUTORING
PP presently tutors 3 PhD students in his labs. In the past he tutored 6 PhD and 6 post-doc researchers

TEACHING
From 1994 many courses were given by PP. Presently, PP teaches Chimica Generale e Inorganica for the Chemistry students and Inorganic Nanochemistry for the master degree in Chemistry

MAJOR COLLABORATIONS
a) Academic: Università Milano Bicocca; Università di Palermo; Seconda Università di Napoli; University of Liverpool, UK; Université de Bourgogne, France; AgroSup Dijon, France; KAUST, Saudi Arabia; Turku University, Finland)
b) Private enterprises: Millbo Spa (Trecate, Italy); Invatec (Roncadelle, Italy); Medtronic (Italy and USA); KME (Germany and Italy)

AWARDS AND INSTITUTIONALE ROLES
2001: Medaglia Nasini prize from the Inorganic Division of the Italian Chemical Society, for the results in the inorganic supramolecular chemistry dedicated to sensors, molecular oriented movements and molecular devices
2005:“Enseignant Invitè” at the Laboratoire de Chimie Organo-Minérale, Faculté de Chimie, Institut Le Bel, Université Louis Pasteur in Strasbourg, France, hosted by the group of Prof. Jean-Pierre Sauvage.
2007 and 2009: “Enseignant Invitè” at the Insitut de Chimie Moleculaire de l'Universitè de Bourgogne, Dijon, France, hosted by the group of Prof. Franck Denat.
2009: guest chief editor for the Coordination Chemistry Reviews special number “Coordination Chemistry in Micelles”
2015-2017: member of Journal of Nanomaterials editorial board
2015-present: member of the Scientific Committee of Congresso Nazionale di Chimica Supramolecolare
2016- 2020: member of the Comitato Tecnico Scientifico del CHT, Centre for Health Technologies, Università di Pavia
2017-2023: director of the Pavia unit and member of the directing and scientific committee of CIRCMSB, (Interuniversitary consortium for the research in metal chemistry of biological systems)
2017-2020: Coordinator of Collegio dei Docenti of the PhD in Chemical and Farmaceutical Science and Industrial Innovation of the University of Pavia
2017-present: member of Collegio Docenti PhD in Chemical and Farmaceutical Sci and Ind Inn – UniPV
2021-present: member of SAFD – scuola di alta formazione dottorale – University of Pavia
2018-guest chief editor for the Special Issue on “Coordination Chemistry for Devices and Functional Materials” in Molecules (MDPI)
2018-present: member of the editorial board of Molecules
2019-present: member of the editorial boardof Nanomaterials

Reviewer for PhD thesis for the universities of Parma, Milano, Torino, Bologna, and for the Université de Bourgogne, Dijon (France), Institut AgroSup Dijon (France), University of Vigo (Spain), University of Liverpool (UK), Indian Institute of Technology Roorkee (India)

BIBLIOMETRIC PARAMETERS

PP is the author of 184 papers, with a total of > 7600 citations and H-index 51 (source: Scopus, september 2023).

PP is the co-inventor of 7 patents (scopus)