

Maddalena Patrini obtained the PhD in Physics in 1997 at the University of Pavia with a PhD thesis on the "Study and characterization of epitaxial III-V semiconductor heterostructures by means of spectroscopic ellipsometry and FFT-FIR". In 1996 has been awarded by the Italian Physical Society with the "Luigi Giulotto" prize for a physics graduate with a thesis in condensed matter physics. From 1996 to 1998 she attended the "Material Science and Technology" postgraduate course of the University of Pavia. From 1998 to 2000 she had a post-doc position granted by Scuola Normale Superiore in Pisa and "Saint-Gobain Recherche Italia" with a research project on "Clusters supported in amorphous matrix". Since 2001 she is researcher in Experimental Physics at the University of Pavia, being in charge of Physics courses of the faculty of Pharmacy and Experimental Physics of the Biotechnology inter-faculty course.

The research interests are in the material science and condensed matter physics, in particular the experimental investigation of the optical properties of materials by means of optical spectroscopies. Previous works focussed on the investigation of electronic and vibrational properties of epitaxial films, heterostructures and quantum structures. The materials investigated by means of reflectance, transmittance and spectroscopic ellipsometry techniques were: III/V binary and ternary semiconductor alloys, low-dimensional structures (thin films, quantum wells and superlattices), diamond-like carbon films; metallic and semiconductor nanocrystals embedded in dielectric matrix, photonic crystals and waveguides, plasmonic nanostructures. Since 2000 she is involved in the experimental activity concerning the optical properties of photonic nanostructured systems and since 2005 the research interests have moved toward biophotonics, including plasmonic and photonic nanostructures. The experimental optical techniques span from reflectance and transmittance to spectroscopic ellipsometry, ATR FTIR, Raman Scattering and photoluminescence.

She is coauthor of more than one hundred scientific papers in international journals and of several contributions to national and international conferences, originated by national and international research projects and collaborations. She is referee of Applied Physics Letters, Journal of Applied Physics and Physical Review B, European Physical Journal B journals. She is with the staff of the Optical Spectroscopy Laboratory of the University of Pavia, as a partner unit of the FP6 EU Network of Excellence PHOREMOST - nanoPHotonics to REalize MOlecular Scale Technologies - ([www.phoremot.org](http://www.phoremot.org)).