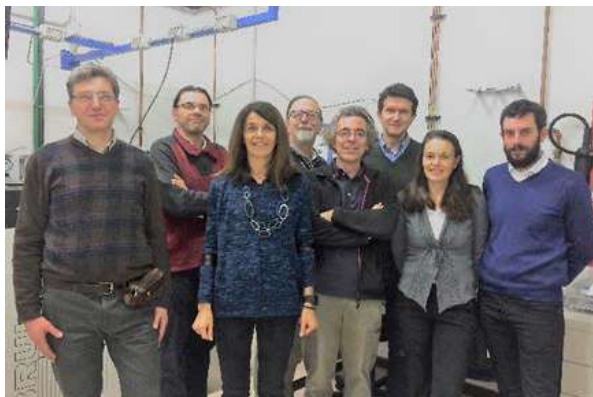


EPR Spectroscopy

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The research activity of the group is focused on the development and application of Electron Paramagnetic Resonance (EPR) techniques to **Material Science** (graphene, metal nanoparticles, organic photovoltaics, cultural heritage materials), and **Biology** (natural and artificial photosynthetic systems, hydrogenases and bio-inspired analogs for the bio-production of hydrogen, protein motions as detected by spin labelling techniques).

The facilities of the EPR Laboratory include: - X-band CW- and pulsed-EPR spectrometer, equipped with pulsed ENDOR and PELDOR accessories - Two CW and ENDOR X band spectrometers - Time-resolved EPR spectrometer for analysis of light-induced processes - Q-band EPR spectrometer with CW, pulsed, ENDOR, PELDOR and time-resolved accessories - Optically detected Magnetic Resonance (ODMR) spectrometer.

- *Identifying conformational changes with site-directed spin labeling reveals that the GTPase domain of HydF is a molecular switch*, Scientific Reports, **2017**, 7, 1714.
- *Light-Induced Porphyrin-Based Spectroscopic Ruler for Nanometer Distance Measurement*, Chemistry-A European Journal, **2016**, 22, 17059-17064.
- *Time-Resolved EPR of Photoinduced Excited States in a Semiconducting Polymer/PCBM Blend*, J. Phys. Chem. C, **2013**, 117, 1554–1560.
- *Au-25(SEt)(18), a Nearly Naked Thiolate-Protected Au-25 Cluster: Structural Analysis by Single Crystal X-ray Crystallography and Electron Nuclear Double Resonance*, ACS Nano, **2014**, 8, 3904-3912.
- *Radical-Enhanced Intersystem Crossing in New Bodipy Derivatives and Application for Efficient Triplet-Triplet Annihilation Upconversion*, J. Am. Chem. Soc., **2017**, 139, 7831–7842.