



Laboratory of EPR spectroscopy

The laboratory's **main objective** is research in the field of electron spin resonance/electron paramagnetic resonance. The target is advanced research with applications in materials science, physics, chemistry, biology, medicine, environment – using electron spin resonance / electron paramagnetic resonance (EPR, ESR), including pulsed procedures such as Electron Spin Echo Envelope Modulation (ESEEM), 2D HYperfine Sub-level CORrElation (HYSCORE), ENDOR, PELDOR as well as experiments at variable temperature (liquid nitrogen and helium).

Permanent team

Assoc. Prof. Radu Silaghi-Dumitrescu, with direct experience in applying EPR/ESR techniques in the biomedical and materials science area.

Prof. Grigore Damian, physicist, experienced in EPR/ESR spectroscopy techniques and methods in material physics and biophysics.

Assoc. Prof. Vasile Miclăuș, chemical engineer with experience in EPR/ESR spectroscopy in inorganic and organic compounds.

Dr. Augustin Moț holds a PhD in Chemistry and is specialized in analytical chemistry, biochemistry and bioinorganic chemistry.

Dr. Viorel Pop is a physicist, specialized in electronics.

Dr. Cristina Pușcaș is a chemist, specialized in the study of bioinorganic paramagnetic centers and of biologically-relevant free radicals, especially in the context of oxidative stress.



The **main activities** of the Center are research-related. Contract-based services are also expected. Any interested parts are welcome to approach the laboratory director in order to discuss either line of collaboration. Prices for renting the laboratory/instrument facility, and/or for providing services, will be subjects of negotiation and laid out in protocols of collaboration.

All BBU personnel may enjoy **access to the facility (ELEXSYS 580 and/or EMX^{micro})**, free of charge – pending a schedule approved by the laboratory director and with the actual measurements being performed by the core personnel. For more extensive collaborations, as well as for contracts/collaborations with third parties, protocols will be negotiated regarding the operator of the instrument, types of experiments and their length, costs, and other aspects.

Current **collaborating groups** originate from:

- University of Texas at San Antonio
- University of Essex
- Ivanovo State University of Chemistry and Technology

Contact:

Tel. + 40 264 593833, Fax + 40 264 590818

Dr. Radu Silaghi-Dumitrescu, rsilaghi@chem.ubbcluj.ro

Dr. Grigore Damian, grigore.damian@phys.ubbcluj.ro

Dr. Vasile Miclăuș, miclaus@chem.ubbcluj.ro

Dr. Cristina Pușcaș, cbischin@chem.ubbcluj.ro

Dr. Augustin Moț, augustinmot@chem.ubbcluj.ro

Dr. Cornel Pop, cornel.pop@phys.ubbcluj.ro

