

## Dr. Fănică Cimpoeșu



**Current position:** senior researcher at the Institute of Physical Chemistry “I. Murgulescu” of Romanian Academy, Splaiul Independentei 202, Bucharest 060021, Tel.:0040-21-6374479, Fax: 0040-21-3121147

**Personal Info:** (birth): 1<sup>th</sup> of February 1967, Stefanesti-Botosani, Romania

**Profile:** FC obtained PhD on a thesis devoted to orbital models of vibronic coupling, supervised by prof. I. B. Bersuker (a coryphaeus in the Jahn-Teller and related effects). Then, self-didactically, approached other several topics such as organometallic stereochemistry and molecular magnetism, trying continuously to enlarge his paradigmatic area. The trademark of FC's works is finding new methodological clues and heuristic viewpoints, at the borderline between theory, computation and real chemistry. Research stages at universities of Leuven (Prof. A. Ceulemans), Goettingen (Prof. H. Roesky), Tokyo (Prof. K. Hirao) and Fribourg (Prof. C. Daul) are acknowledged as emulative events in the curriculum vitae.

**Degrees and diplomas:** He received his Diploma in Chemistry from the University of Bucharest, Faculty of Chemistry, Bucharest, Romania in 1991, the Doctor of Philosophy degree in 1998 from the Moldova State University, Kishinev, Republic of Moldova.

**Professional experience and jobs:** Working at the Institute of Physical Chemistry “I. Murgulescu” of Romanian Academy, Bucharest, Romania, since 1991, (research assistant). He became researcher in 1994, senior researcher III in 2002, senior researcher II in 2008, being senior researcher I since 2014. Head of *Structural Chemistry Group* at the Institute for Physical Chemistry.

**Several research stages:** Between Sept. 1996-Aug.1997, - research stage at the Catholic University from Leuven, Belgium (Prof. A. Ceulemans). At University of Göttingen, Germany (structure calculation and modelling, Institute of Inorganic Chemistry, group of Prof. Roesky, 1999-2001), At the University of Tokyo, Tokyo, Japan (JSPS fellowship in the group of Prof. K. Hirao, 2002-2004), At the Tohoku University, Sendai, Japan (COE fellowship in the group of Prof. Y. Fujimura, 2005-2007), Visiting professor, at University of Fribourg, Switzerland, periodically, within 2013-2015.

**Awards:** The Japan Society for Promotion Science Fellowship was awarded in 2002 and the Japanese Center of Excellence Fellowship in 2005.

**International cooperations.** Collaborations with Prof. N. Dragoe, Université Paris Sud, Laboratoire de Physico-Chimie des Solides, Orsay, France Dr. Minoru Abe, Tokyo Metropolitan University, Prof. Werner Urland (Private Institute of Theoretical Chemical Physics, CH-6600 Muralto, Switzerland) and Markus Suta from Heinrich Heine University Düsseldorf.

**Skills:** Interdisciplinary handling of notions from chemistry and physics; computer programming in various languages (fortran, pascal, visual-basic, python, excel, mathematica, matlab); analytical handling of the formulas and interest for construction of new theoretical and phenomenological models; capacity to approach numerical problems, like fitting model Hamiltonians to magnetic and spectroscopic data or potential energy surfaces; experience of using quantum chemistry packages: GAMESS, MOLPRO, MOLCAS, TURBOMOLE, GAUSSIAN, ADF, ABINIT etc.

**Research projects:** 13 research grants as main investigator, in national and international competitions. International grants: *New approach to molecular structure through the vibronic paradigm*, Funding agency: Japan Society for Promotion Science (JSPS), Grant-in-aid P02163/2002-2004, Funds: 1800000JPY (~15000EUR), *Ab Initio Methods and Model Hamiltonians for the rationalization and design of the dynamic and magneto-optical effects in the real-scale molecular systems. Toward the physical control of individual and assembled molecules*, Funding agency: Japan Society for Promotion Science (JSPS), Ministry of Education, Culture, Sport, Technology and Science of Japan (MEXT), Total funding: 1000000JPY (~8000 EUR), Period: 2005-2007.

**Scientometric indicators:** 80 publication indexed in the Web of Science, 1 book (*Structural Chemistry: Principles, Methods, and Case Studies* at Springer), 4 local text books (University Bucuresti Press and Ars Docendi), and 4 chapters (Apple Academic & CRC Press, Springer, IGI Global), 3 papers non ISI. The number of citations is ~ 1411, and the Hirsch index is 21 (according to Scopus data base). Brainmap ID U-1700-029Z-1375; Scopus Author ID: 6602466475, ResearcherID: C-5757-2012 ; OrcidID: 0000-0003-0036-304X. Given the interdisciplinary scientific interests of applicant, the works are spreaded in a rather large spectrum of specialized and general chemistry journals. Summarizing only the journals with large impact factors, the published papers of the applicant span the following journal titles : general chemistry (*J. Am. Chem. Soc.*, *Angew. Chem.*); physics (*Phys. Rev. Lett.*); theoretical chemistry (*Int. J. Quant. Chem.*, *J. Mol. Struct.-Theochem.*, *Adv. Quant. Chem.*); inorganic chemistry (*Inorg. Chem.*, *Polyhedron*), -organometallic chemistry (*Organometallics*); physical chemistry (*Chem.Phys.Lett.*, *PhysChemChemPhys*, *J. Phys. Chem.C*).