

Europass Curriculum Vitae

Personal information

First name(s) / Surname(s) **Leontin David**
Address(es) "Babes-Bolyai" University, Faculty of Physics, Kogalniceanu 1, 400084, Cluj-Napoca, Romania
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E-mail
Nationality Romanian
Date of birth
Gender Male

Work experience

Dates 2003-present
Occupation or position held PhD supervisor
Main activities and responsibilities Guidance of PhD students
Name and address of employer "Babes-Bolyai" University, Faculty of Physics, Kogalniceanu 1, 400084, Cluj-Napoca, Romania
Type of business or sector Education

Dates 2001-present
Occupation or position held Professor in the Department of Biomedical Physics, Theoretical Physics and Molecular Spectroscopy
Main activities and responsibilities Teaching courses: "Resonance methods with biomedical applications", "Radiology and medical imaging" (bachelor / master level)
Name and address of employer "Babes-Bolyai" University, Faculty of Physics, Kogalniceanu 1, 400084, Cluj-Napoca, Romania
Type of business or sector Education

Dates 1997-2001
Occupation or position held Associate Professor in the Department of Atomic, Nuclear and Environmental Physics
Main activities and responsibilities Teaching course: "The physics of atom and molecule"
Name and address of employer "Babes-Bolyai" University, Faculty of Physics, Kogalniceanu 1, 400084, Cluj-Napoca, Romania
Type of business or sector Education

Education and training

Dates 1990-1995
Title of qualification awarded Ph.D. / Physics
Principal subjects/occupational skills covered Atomic and molecular physics
Thesis: "Magneto-structural correlations in molecular complexes"
Name and type of organisation providing education and training "Babes-Bolyai University", Faculty of Physics, Cluj-Napoca, Romania

Dates 1978-1982
Title of qualification awarded Licensed in Physics
Principal subjects/occupational skills covered Physics

Name and type of organisation providing education and training

"Babes-Bolyai" University, Faculty of Physics, Cluj-Napoca, Romania

Personal skills and competences

Mother tongue(s)

Romanian

Other language(s)

Italian, English

Self-assessment

European level (*)

Italian

English

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
very good	very good	very good	very good	very good	
very good	very good	very good	fluent	very good	

(*) *Common European Framework of Reference for Languages*

Technical skills and competences

1. Structural studies of metallic complexes with ligands of biological interest - preparation and investigation by physically-chemically measurement, spectroscopic (UV-vis, FT-IR, Raman, EPR) and magnetic methods;
2. Spectroscopic and magnetic investigation of compounds with transition metals and actinides – EPR spectroscopy;
3. Magneto-structural correlations in molecular clusters - study of sandwich-type heteropolyoxometalates encapsulating clusters of metallic ions.

Computer skills and competences

Common scientific and office programs

Additional information

ResearcherID profile: <http://www.researcherid.com/rid/F-1892-2011>

Other research experience abroad:

- i. Visiting scientist at the Department of Chemistry and Physics, Firenze University, Italy, during 1992 – 1996, 3 months / year.

Invited talks:

- O. Cozar, L. David, C. Craciun, Local structure and interaction between transitional ions in some supramolecular systems, Joint Summer School, JINR-Romania on Neutron Physics for Investigations of Nuclei, Condensed Matter and Life Sciences, July 1-7, 2002, Baia-Mare;
- O. Cozar, L. David, Spectroscopic studies of some metal ion-cardiovascular drug complexes, *5th International Balkan Workshop on Applied Physics* July 5-7, 2004, Constanța, Romania;
- O. Cozar, N. Leopold, L. David, V. Chis, M. Tomoaia-Cotisel, A. Mocanu, Structural investigation on cation recognition molecules, *4th Conference Izotopic and Molecular Processes*, September 22-24, 2005, Cluj-Napoca, Romania
- A. Bebu, L. Szabo, N. Leopold, C. Berindean, V. Chis, L. David, IR, Raman, SERS and DFT study of amoxicillin, EUCMOS 2010, Florence, 29. 08 – 03.09, 2010.

Number of articles: 101

The total number of citation: 760

Hirsch number: 15

Annexes | List of selected publications:

- [1] C. Muller, L. David, V. Chis, S. Cinta Pinzaru, "Detection of thiabendazole applied on citrus fruits and bananas using surface enhanced Raman scattering", *Food Chem.*, **145**, 814-820 (2014)
- [2] A. Ungurean, N. Leopold, L. David, V. Chis, "Vibrational spectroscopic and DFT study of trimethoprim", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, **102**, 52-58 (2013)
- [3] L. Fanea, L. David, A. Lebovici, F. Carbone, A. Sfringeu, "Theoretical Compartment Modeling of DCE-MRI Data Based on the Transport across Physiological Barriers in the Brain", *Comput. Math. Methods Med.*, **2012**, 482565 (6 pages) (2012)
- [4] I.B. Cozar, L. Szabo, D. Mare, N. Leopold, L. David, V. Chis, "IR, Raman, SERS and DFT study of paroxetine", *J. Mol. Struct.*, **993**, 243-248 (2011)
- [5] I.B. Cozar, L. Szabo, N. Leopold, V. Chis, O. Cozar, L. David, "IR, Raman, SERS and DFT study of pindolol and verapamil", *J. Mol. Struct.*, **993**, 308-315 (2011)
- [6] O. Cozar, L. Szabo, I.B. Cozar, N. Leopold, L. David, C. Cainap, V. Chis, "Spectroscopic and DFT study of atenolol and metoprolol and their copper complexes", *J. Molec. Struct.*, **993**, 357-366 (2011)
- [7] O. Cozar, I. Bratu, L. Szabo, I.B. Cozar, V. Chis, L. David, "IR and ESR study of copper(II) complexes with (15)N-labelled lysine and ornithine", *J. Molec. Struct.*, **993**, 397-403 (2011)
- [8] A. Bebu, L. Szabo, N. Leopold, C. Berindean, L. David, "IR, Raman, SERS and DFT study of amoxicillin", *J. Molec. Struct.*, **993**, 52-56 (2011)
- [9] I.B. Cozar, L. Szabo, N. Leopold, V. Chis, L. David, "Raman, SERS and DFT study of atenolol and metoprolol cardiovascular drugs", *Romanian J. Phys.*, **55**, 772-781 (2010)
- [10] A. Stanila, C. Nagy, A. Marcu, D. Cozma, D. Rusu, L. David, "Spectroscopic investigations of new metallic complexes with leucine as ligand", *Nucl. Instrum. Methods Phys. Res., Sect. B*, **267**, 419-421 (2009)
- [11] O. Baban, I. Hauer, D. Rusu, M. Rusu, N.L. Mogonea, L. David, "Structural investigations of sandwich-type heteropolyoxometalate with dinuclear vanadium cluster", *Nucl. Instrum. Methods Phys. Res., Sect. B*, **267**, 422-425 (2009)
- [12] G.L. Turdean, A. Patrut, L. David, I.C. Popescu, "Electrochemical behaviour of a new triiron-substituted polyoxomolybdate", *J. Appl. Electrochem.*, **38**, 751-758 (2008)
- [13] A. Stanila, A. Marcu, D. Rusu, M. Rusu, L. David, "Spectroscopic studies of some copper(II) complexes with amino acids", *J. Mol. Struct.*, **834**, 364-368 (2007)
- [14] N. Joo, M. Hossu, D. Rusu, A. Marcu, M. Rusu, C. Pasca, L. David, "Synthesis and physical-chemical study of two sandwich-type heteropolyoxometalates with dinuclear vanadium clusters", *Acta Chim. Slov.*, **54**, 749-754 (2007)
- [15] O. Cozar, N. Leopold, C. Jelic, V. Chis, L. David, A. Mocanu, M. Tomoaia-Cotisel, "IR, Raman and surface-enhanced Raman study of desferrioxamine B and its Fe(III) complex, ferrioxamine B", *J. Mol. Struct.*, **788**, 1-6 (2006)
- [16] V. Chis, A. Pirnau, T. Jurca, M. Vasilescu, S. Simon, O. Cozar, L. David, "Experimental and DFT study of pyrazinamide", *Chem. Phys.*, **316**, 153-163 (2005)
- [17] C. Batiu, C. Jelic, N. Leopold, O. Cozar, L. David, "Spectroscopic investigations of new Cu(II), Co(II), Ni(II) complexes with gamma-L-glutamyl amides as ligand", *J. Mol. Struct.*, **744**, 325-330 (2005)
- [18] C. Craciun, D. Rusu, L. Pop-Fanea, M. Hossu, M. Rusu, L. David, "Spectroscopic investigation of several uranium(IV) polyoxometalate complexes", *J. Radioanal. Nucl. Chem.*, **264**, 589-594 (2005)
- [19] D.A. Magdas, O. Cozar, I. Ardelean, L. David, "Spectroscopic studies of some phosphate glasses with molybdenum ions", *Internat. J. Modern Phys. B*, **19**, 1815-1820 (2005)

- [20] C. Batiu, I. Panea, L. Ghizdavu, L. David, S.G. Pellascio, "Divalent transition metal complexes - 4-(4-ethoxy-phenylhydrazono)-1-phenyl-3-methyl-1H-pyrazolin-5(4H)-one", *J. Therm. Anal. Calorim.*, **79**, 129-134 (2005)
- [21] D. Rusu, L. David, C. Craciun, L. Pop-Fanea, M. Hossu, M. Rusu, "Tetranuclear Cu(II) cluster encapsulated in one arsenic(V) heteropolyoxotungstate. Spectroscopic and magnetic investigation", *Acta Chim. Slov.*, **51**, 629-640 (2004)
- [22] C. Batiu, L. Ghizdavu, L. David, O. Cozar, "Cu(II), Mn(II), Co(II), and Fe(III) complexes with gamma-L-glutamyl-5-(m-nitroanilide) as ligand. Spectroscopic, magnetic, and thermal studies", *Synth. React. Inorg. Met.-Org. Chem.*, **33**, 1391-1403 (2003)
- [23] O. Cozar, R. Micu-Semeniuc, L. David, I. Haiduc, "Local structure and metal-metal interaction in some Cr(III)-dithiophosphate compounds", *Mod. Phys. Lett. B*, **16**, 401-407 (2002)
- [24] C. Craciun, M. Rusu, L. David, O. Cozar, D. Rusu, I. Cosma, "Spectroscopic and magnetic investigation of one uranium(IV)-polyoxotungstate complex", *J. Radioanal. Nucl. Chem.*, **252**, 145-149 (2002)
- [25] L. Ghizdavu, C. Cristea, I.A. Silberg, C. Balan, L. David, "Coordination compounds of copper(II) with new 1,4-benzothiazino-[2,3-b]phenothiazine derivatives", *Synth. React. Inorg. Met.-Org. Chem.*, **32**, 1-7 (2002)
- [26] L. David, C. Craciun, V. Chis, R. Tetean, "EPR and HF-EPR study of a trinuclear Mn-II cluster encapsulated in one sandwich-type heteropolyanion", *Solid State Commun.*, **121**, 675-678 (2002)
- [27] D. Rusu, C. Craciun, A.L. Barra, L. David, M. Rusu, C. Rosu, O. Cozar, G. Marcu, "Spectroscopic and electron paramagnetic resonance behavior of trinuclear metallic clusters encapsulated in $[M-3(n+)(H_2O)(x)-(BiW_9O_{33})_2]^{(18-3n)-}$ heteropolyanion ($Mn+ = (VO)(II)$, $x=0$ and $Mn+ = Cr-III, Mn-II, Fe-III, Co-II, Ni-II, Cu-II$, $x=3$)", *J. Chem. Soc., Dalton Trans.*, issue 19, 2879-2887 (2001)
- [28] C. Craciun, L. David, "Spectroscopic and magnetic investigation of one sandwich-type uranium(IV)-polyoxometalate with Ge(IV) as heteroatom", *J. Alloys Compd.*, **323**, 743-747 (2001)
- [29] O. Cozar, L. David, V. Chis, G. Damian, M. Todica, C. Agut, "IR and ESR studies on some dimeric copper(II) complexes", *J. Mol. Struct.*, **563**, 371-375 (2001)
- [30] O. Cozar, I. Ardelean, I. Bratu, S. Simon, C. Craciun, L. David, C. Cefan, "IR and EPR studies on some lithium-borate glasses with vanadium ions", *J. Mol. Struct.*, **563**, 421-425 (2001)
- [31] D. Rusu, C. Rosu, C. Craciun, L. David, M. Rusu, G. Marcu, "FT-IR, UV-VIS and EPR investigations of multicopper polyoxotungstates with Bi-III as heteroatom", *J. Mol. Struct.*, **563**, 427-433 (2001)
- [32] L. David, C. Craciun, O. Cozar, V. Chis, C. Agut, D. Rusu, M. Rusu, "Spectroscopic studies of some oxygen-bonded copper(II) beta-diketonate complexes", *J. Mol. Struct.*, **563**, 573-578 (2001)
- [33] C. Craciun, L. David, D. Rusu, M. Rusu, O. Cozar, G. Marcu, "Complexation of three uranium(IV) ions at two alpha-B-[SbW₉O₃₃](9-) trilacunary Keggin units: A spectroscopic investigation", *J. Radioanal. Nucl. Chem.*, **247**, 307-310 (2001)
- [34] L. David, C. Craciun, C. Balan, O. Cozar, L. Ghizdavu, C. Batiu, "New transition metal complexes of gamma-L-glutamyl-5-(2-methoxy-p-nitroanilide): Synthesis, spectroscopic, magnetic and thermal investigations", *Acta Chim. Slov.*, **48**, 407-415 (2001)
- [35] O. Cozar, I. Bratu, L. David, C. Craciun, A. Hernanz, R. Navarro, M. de la Fuente, C. Balan, "EPR investigations of Cu(II) complexes with 5'-CMP and 5'-GMP", *Appl. Magn. Reson.*, **21**, 71-78 (2001)
- [36] L. David, C. Craciun, "Coexistence of one-electron- and monoprotonated two-electron-reduced species of the K-5[PMo₂VW₉O₄₀]center dot 24H(2)O heteropolyoxometalate identified by EPR", *Appl. Magn. Reson.*, **20**, 357-364 (2001)
- [37] L. David, C. Craciun, M. Rusu, O. Cozar, P. Ilea, D. Rusu, "Spectroscopic and electrochemical investigations of the K-8[P₂VMoW₁₆O₆₂]center dot 31H(2)O heteropolyoxometalate", *Polyhedron*, **19**, 1917-1923 (2000)
- [38] M. Rusu, D. Rusu, C. Rosu, C. Craciun, L. David, A.R. Tomsa, G. Marcu, "Keggin polyoxotungstoborate with uranium(IV)", *J. Radioanal. Nucl. Chem.*, **245**, 363-366 (2000)
- [39] L. Ghizdavu, C. Balan, L. David, C. Batiu, O. Cozar, D. Ristoiu, "Spectroscopic, magnetic and thermal investigations on Cu(II), Mn(II), Co(II) and Fe(III) complexes with glutamyl nitroanilide", *J. Therm. Anal. Calorim.*, **62**, 729-736 (2000)
- [40] L. David, C. Craciun, M. Rusu, D. Rusu, O. Cozar, "Spectroscopic and magnetic investigation of the K-5[PMo₂VW₉O₄₀]center dot 24H(2)O heteropolyoxometalate and its monoprotonated form", *J. Chem. Soc., Dalton Trans.*, issue 23, 4374-4378 (2000)

- [41] L. David, O. Cozar, E. Forizs, C. Craciun, D. Ristoiu, C. Balan, "Local structure analysis of some Cu(II) theophylline complexes", *Spectrochim. Acta, Part A*, **55**, 2559-2564 (1999)
- [42] E. Forizs, L. David, O. Cozar, V. Chis, G. Damian, J. Csibi, "IR and ESR studies on novel Cu(II) theophyllinato complexes containing mono- or bidentate ligands", *J. Mol. Struct.*, **482**, 143-147 (1999)
- [43] L. David, M. Rusu, O. Cozar, D. Rusu, M. Todica, C. Balan, "Spectroscopic and magnetic investigations of some transition metal complexes with N-4-methoxyphenyl-N-4-chlorobenzoyl hydrazide as ligand", *J. Mol. Struct.*, **482**, 149-152 (1999)
- [44] I. Haiduc, L. David, O. Cozar, R. Micu-Semeniuc, G. Mezei, M. Armenean, "Spectroscopic and magnetic studies of some copper(II) and chromium(III) complexes with dithiophosphonates as ligands", *J. Mol. Struct.*, **482**, 153-157 (1999)
- [45] V. Chis, M. Brustolon, C. Morari, O. Cozar, L. David, "Experimental and theoretical structural parameters of the glycine (C) over dot H(2)-NH(2) radical", *J. Mol. Struct.*, **482**, 283-286 (1999)
- [46] G. Damian, V. Miclaus, O. Cozar, M. Todica, L. David, V. Chis, D. Ristoiu, S. Farcas, "EPR study of some copper heterocyclic azomethine complexes adsorbed on X and Y zeolites", *J. Mol. Struct.*, **482**, 287-289 (1999)
- [47] M. Todica, O. Cozar, G. Damian, L. David, V. Chis, "NMR and ESR study of the local dynamics in some polyisoprene solutions", *J. Mol. Struct.*, **482**, 353-357 (1999)
- [48] S. Cinta, T. Iliescu, S. Astilean, L. David, O. Cozar, W. Kiefer, "1,4-benzodiazepine drugs adsorption on the Ag colloidal surface", *J. Mol. Struct.*, **482**, 685-688 (1999)
- [49] O. Cozar, I. Ardelean, V. Simon, L. David, N. Vedean, V. Mih, "EPR studies of Cu²⁺ and V⁴⁺ ions in phosphate glasses", *Appl. Magn. Reson.*, **16**, 473-480 (1999)
- [50] E. Forizs, L. David, O. Cozar, V. Chis, C. Craciun, R. Tetean, M. Todica, "ESR study of some Cu(II)-oxazepam complexes", *Appl. Magn. Reson.*, **16**, 499-506 (1999)
- [51] O. Cozar, I. Ardelean, V. Simon, L. David, V. Mih, N. Vedean, "The local structure and interactions between V⁴⁺ ions in soda-phosphate glasses", *Appl. Magn. Reson.*, **16**, 529-537 (1999)
- [52] G. Damian, O. Cozar, V. Miclaus, C. Paizs, V. Znamirovski, V. Chis, L. David, "ESR study of the dynamics of adsorbed nitroxide radicals on porous surfaces in the dehydration process", *Colloids Surf., A*, **137**, 1-6 (1998)
- [53] R. Micu-Semeniuc, R.F. Semeniuc, O. Cozar, L. David, "Copper complexes of 1,4-dihydrazinophthalazine. Synthesis and spectral characterization", *Synth. React. Inorg. Met.-Org. Chem.*, **28**, 501-513 (1998)
- [54] E. Forizs, L. David, O. Cozar, C. Craciun, M. Venter, M. Kilyen, "IR and ESR study of Cu(II)-nitrazepam complexes", *J. Mol. Struct.*, **408**, 195-199 (1997)
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- [56] O. Cozar, V. Chis, L. David, G. Damian, I. Barbur, "ESR investigation of gamma-irradiated Aspirin", *J. Radioanal. Nucl. Chem.*, **220**, 241-244 (1997)
- [57] M. de la Fuente, O. Cozar, L. David, R. Navarro, A. Hernanz, I. Bratu, "EPR study of the 1:1 complexes of chromium(III) and copper(II) with 5'-GMP and 5'-CMP", *Spectrochim. Acta, Part A*, **53**, 637-641 (1997)
- [58] L. David, O. Cozar, L. Sumalan, V. Chis, R. Tetean, C. Craciun, "ESR study of some Cu(II)-4-substituted-2-thiazolyldiazepam complexes", *Appl. Magn. Reson.*, **13**, 571-577 (1997)
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- [62] L. Angeloni, A. Caneschi, L. David, A. Fabretti, F. Ferraro, D. Gatteschi, A. Lelirzin, R. Sessoli, "Crystal-structures, magnetic and nonlinear-optical properties of methoxyphenyl nitronyl-nitroxide radicals", *J. Mater. Chem.*, **4**, 1047-1053 (1994)

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- [64] L. David, O. Cosar, V. Chis, A. Negoescu, I. Vlasin "ESR study of Cu(II)-indomethacin and its pyridine and DMF adducts", *Appl. Magn. Reson.*, **6**, 521-528 (1994)
- [65] J. Casanova, G. Alzuet, J. Borrás, L. David, D. Gatteschi, "Metal-complexes of sulfanilamide derivatives – spectroscopic characterization of the dichloro disulfathiazole methanol copper (II) complex", *Inorg. Chim. Acta*, **211**, 183-186 (1993)
- [66] A. Caneschi, P. Chiesi, L. David, F. Ferraro, D. Gatteschi, R. Sessoli, "Crystal structure and magnetic properties of two nitronyl nitroxide biradicals and of their copper(II) complexes", *Inorg. Chem.*, **32**, 1445-1453 (1993)
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Cluj-Napoca, 09.05.2016

Prof. dr. Leontin David