

Panayotis Kyritsis



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LABORATORY OF INORGANIC CHEMISTRY, DEPARTMENT OF CHEMISTRY,
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(1562 citations, h-index 23)

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EDUCATION

- 1987 Bachelor Chemistry / National and Kapodistrian University of Athens (NKUA) / Greece
- 1993 PhD / University of Newcastle, UK / "Electron-Transfer Reactivity of Some Cu-containing Proteins"

RESEARCH FIELDS

Synthesis of transition metal complexes and studies on their structural, electronic, magnetic and catalytic properties

EDUCATIONAL EXPERIENCE

UNDERGRADUATE COURSES

- Inorganic Chemistry III / Department of Chemistry / NKUA
- Inorganic Chemistry I / Department of Pharmacy / NKUA

GRADUATE COURSES

- Laboratory of Inorganic Chemistry / Department of Chemistry / Post-graduate Course "Inorganic Chemistry and its Applications in the Industry" / "Topics of Inorganic Chemistry", "Inorganic Structure and reactivity", "Contemporary spectroscopic methods and methods of determination and analysis - Laboratory course"
- Laboratory of Inorganic Chemistry / Department of Chemistry / Post-graduate Course "Catalysis and its Applications in the Industry" / "Basic Biocatalysis"

DISCRIMINATIONS / SCHOLARSHIPS

- PhD Fellowship, IKY (State Scholarship Foundation of Greece) / 1989-1993.
- Shaw-Shaville prize for PhD Thesis, University of Newcastle, UK / 1995.
- Fulbright Foundation Scholar / National High Magnetic Field Laboratory, Tallahassee, Florida, USA / 2013.

RESEARCH GRANTS

- “IKYDA” / “Synthesis of analogues of the Mo or W oxotransferase active sites” / 2002-2003.
- “Plato”, GSRT-France / “The role of a family of bacterial ferredoxins in the pathogen-host interactions” / 2003-2005.
- “Ministry of Education – Czech Republic” / “Synthesis of Rh(I) complex compounds and study of their catalytic activity in hydroformylation and polymerization reactions” / 2003.
- “Empirikion Foundation” / “Structure / function relationships in 2[4Fe-4S] ferredoxins” / 2004.
- “Pythagoras” / “Synthesis of inorganic compounds with predefined properties in catalysis and photocatalysis” / Collaborating Researcher / Coordinated by Professor C. Mitsopoulou.
- “PICS”, GSRT-France / “Biological activity and biochemical properties of a new family of ferredoxins in pathogenic bacteria” / 2005-2007.
- “Ministry of Education – Czech Republic” / “Synthesis of Ni(II) and Pd(II) complex compounds and study of their catalytic activity in C–C coupling reactions” / 2008.
- Member of the Management Committee of the COST Action “European Phosphorus Sciences Network” / 2009-2013.
- “Heraclitus II” / Supervision of the PhD Thesis of Mr. I. Stamatopoulos / 2011-2014.
- “Thales” / “Innovative materials for nanocrystalline solar cells” and “Developing innovative solar cells for the production of hydrogen and electricity from the oxidation of organic compounds using solar radiation” / Collaborating Researcher / Coordinated by Professors P. Lianos and D. Kontaridis, University of Patras, respectively.
- “Empirikion Foundation” / “Catalytic properties of complexes of the type $[M(P,P)X_2]$, $[M(E,P)X_2]$ and $[M(E,E)X_2]$, $M = Ni, Pd, Pt$; $E = O, S, Se$; $X = Cl, Br, I$ ” / 2012.
- Member of the Management Committee of the COST Action “Explicit Control Over Spin-States in Technology and Biochemistry” / 2014-2018.
- “ELIDEK” / Supervision of the PhD Thesis of Mrs M. Tsoukala / 2017-2019.
- “IKY” / Supervision of the Post-doctoral Research Associate Dr Eleftherios Ferentinos / “Synthesis and investigation of mononuclear 3d Single Molecule Magnets” / 2017-2019.
- “Support of researchers with emphasis to young researchers – 2nd call / “Aqueous Asymmetric Homogeneous Catalysis” / Deputy Supervisor / Supervised by Dr I.D. Kostas, Research Director, National Research Foundation / 2020-2021.

REVIEWER OF SCIENTIFIC JOURNALS

Journal of the American Chemical Society, Chemistry a European Journal, Inorganic Chemistry, Dalton Transactions, Inorganic Chemistry Frontiers, European Journal of Inorganic Chemistry, Journal of Materials Chemistry C / Journal of Physical Chemistry Letters, Inorganica Chimica Acta, Polyhedron, Inorganic Chemistry Communications, Chemistry Select, Applied Organometallic Chemistry, Crystal Growth, Canadian Journal of Chemistry, Bioinorganic Chemistry and Applications, Central European Journal of Chemistry, Open Chemistry, Materials, Magnetochemistry, Journal of Chemistry, European Polymer Journal, Journal of Hazardous Materials, Collection of Czechoslovak Chemical Communications.

EDITOR OF BOOKS AND SPECIAL VOLUMES

- “Experiments in General and Inorganic Chemistry” (Stamoulis ed., 2005, in Greek, 8 co-authors).
- “Electron transfer reactivity of mutants of the blue copper protein plastocyanin”, A.G. Sykes, P. Kyritsis, M. Nordling, S. Young, in “Bioinorganic Chemistry of Copper”, K.D. Karlin and Z. Tyeklar, Eds., Chapman and Hall, New York 1993, p. 78-90.
- “Structure and reactivity of the blue copper proteins”, P. Kyritsis, C. Dennison and A.G. Sykes, NATO ASI Publications, “Bioinorganic Chemistry”, D.P. Kessissoglou, Ed., 1995, Kluwer Academic Publishers, p. 67-76.

PATENTS

ADDITIONAL INFORMATION

- Presentations at conferences: **110**
- Supervision of doctoral theses: **6**
- Supervision of graduate students: **30**
- Supervision of undergraduate students: **30**
- PI in 10 Research Programs
- Collaboration/Participation in **4** Research Programs
- Reviewer in Research Programs: **10**

SELECTED PUBLICATIONS (link OF PUBLICATIONS)

- "Direct observation of very large zero-field splitting in a tetrahedral Ni^{II}Se₄ coordination complex", S.-D. Jiang, D. Maganas, N. Levesanos, E. Ferentinos, S. Haas, K. Thirunavukkuarasu, J. Krzystek, M. Dressel, L. Bogani,* F. Neese,* **P. Kyritsis,*** *J. Am. Chem. Soc.*, 2015, **137**, 12923-12928 (<https://pubs.acs.org/doi/10.1021/jacs.5b06716>).
- "Magnetic anisotropy of tetrahedral Co^{II} Single Ion Magnets: Solid state effects", S. Sottini, G. Poneti,* S. Ciattini, N. Levesanos, E. Ferentinos, J. Krzystek, L. Sorace, **P. Kyritsis,*** *Inorg. Chem.*, 2016, **55**, 9537-9548 (<https://pubs.acs.org/doi/10.1021/acs.inorgchem.6b00508>).
- "A molecular Ni-complex containing tetrahedral nickel selenide core as highly efficient electrocatalyst for water oxidation", "A molecular Ni-complex containing tetrahedral nickel selenide core as highly efficient electrocatalyst for water oxidation", J. Masud, P.-C. Ioannou, N. Levesanos, **P. Kyritsis,*** M. Nath,* *ChemSusChem*, 2016, **9**, 3128-3132 (<https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/cssc.201601054>). Εξώφυλλο του Τεύχους 22/2016 (<https://chemistry-europe.onlinelibrary.wiley.com/toc/1864564x/2016/9/22>).
- "The [Fe{(SePPh₂)₂N₂}] complex revisited: X-ray crystallography, magnetometry, high-frequency EPR and Mössbauer studies reveal its tetrahedral Fe^{II}Se₄ coordination sphere", E. Ferentinos, S. Chatziefthimiou, A.K. Boudalis, M. Pissas, G. Mathies, P. Gast, E.J.J. Groenen,* Y. Sanakis,* P. Kyritsis,* *Eur. J. Inorg. Chem.*, 2018, 713-721 (<https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/ejic.201701459>).
- "Field-induced slow relaxation of magnetization in the S = 3/2 octahedral complexes trans-[Co{(OPPh₂)(EPPH₂)N₂(dmf)₂}], E = S, Se: Effects of Co-Se vs Co-S coordination", E. Ferentinos, M. Xu, A. Grigoropoulos, I. Bratsos, C.P. Raptopoulou, V. Psycharis, S.-D. Jiang,* **P. Kyritsis,*** *Inorg. Chem. Front.*, 2019, **6**, 1405-1414 (<https://pubs.rsc.org/en/content/articlelanding/2019/QI/C9QI00135B>).
- "Unusual ³¹P Hyperfine Strain Effects in a conformationally flexible Cu(II) complex revealed by two-dimensional Pulse EPR spectroscopy", N.-A. Stamos, E. Ferentinos, M. Chrysina, C.P. Raptopoulou, V. Psycharis, Y. Sanakis, D.A. Pantazis,* **P. Kyritsis,*** G. Mitrikas,* *Inorg. Chem.*, 2020, **59**, 3666-3676 (<https://pubs.acs.org/doi/10.1021/acs.inorgchem.9b03237>).
- "Magnetic properties and electronic structure of the S = 2 complex [Mn^{III}{(OPPh₂)₂N₃}] showing field-induced slow magnetization relaxation", Y. Sanakis,* J. Krzystek,* D. Maganas, A. Grigoropoulos, E. Ferentinos, V. Petroulea, M. Pissas, K. Thirunavukkuarasu, W. Wernsdorfer, F. Neese, **P. Kyritsis,*** *Inorg. Chem.*, 2020, **59**, 13281-13294 (<https://pubs.acs.org/doi/10.1021/acs.inorgchem.0c01636>).
- "Electronic structure of tetrahedral, S = 2, [Fe{(EPⁱPr₂)₂N₂}], E = S, Se, complexes: Investigation by High-Frequency and -Field EPR, ⁵⁷Fe Mössbauer Spectroscopy and Quantum Chemical Studies", S.A. Stoian,* M. Moshari, E. Ferentinos, A. Grigoropoulos, J. Krzystek, J. Telser, **P. Kyritsis,*** *Inorg. Chem.*, 2021, **60**, 10990-11005 (<https://pubs.acs.org/doi/10.1021/acs.inorgchem.1c00670>).

- “Effects of the halogenido ligands on the Kumada-coupling catalytic activity of $[\text{Ni}\{\text{}^t\text{BuN}(\text{PPh}_2)_2\text{-}\sigma\text{-P}\}\text{X}_2]$, X = Cl, Br, I”, P.-C. Ioannou, R. Coufal, K. Kakridi, C.P. Raptopoulou, O. Trhlíková, V. Psycharis,* J. Zedník,* P. Kyritsis,* J. Vohlídal, *RSC Adv.*, 2022, 12, 2227-2236 (<https://pubs.rsc.org/en/content/articlelanding/2022/RA/D1RA04572E>).
- “Magnetic anisotropy and structural flexibility in the field-induced single ion magnets $[\text{Co}\{(\text{OPPh}_2)(\text{EPPH}_2)\text{N}\}_2]$, E = S, Se, explored by experimental and computational methods”, E. Ferentinos, D. Tzeli, S. Sottini, E.J.J. Groenen, M. Ozerov, G. Poneti,* K. Kaniewska-Laskowska, J. Krzystek,* P. Kyritsis,* *Dalton Trans.*, 2023, in press (<https://doi.ORG/10.1039/D2DT03335F>).