

PERSONAL INFORMATION

Karin Popa

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Sex Male | Nationality Romanian

WORK EXPERIENCE

06/2014 - present

Project Officer - Scientific

European Commission, Joint Research Centre, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen (Germany)

Business or sector Scientific research and Development

03/2011 - 05/2014

Department Manager

Uranium National Company, Feldioara Branch, 1 - Dumbrăvii, 507065 Feldioara (Romania)

Business or sector Energy

07/2004 - 06/2007

Postdoctoral Researcher (Cat. 30)

European Commission, Joint Research Centre, Institute for Transuranium Elements, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen (Germany)

Business or sector Scientific research and Development

02/1999 - 03/2011

(up to) Associate Professor

"Alexandru Ioan Cuza" University, Department of Chemistry, 11 - Carol I Blvd., 700506 Iași (Romania)

Business or sector Academic research and teaching

EDUCATION AND TRAINING

09/1999 - 11/2001

Ph.D.

"Alexandru Ioan Cuza" (University), 11 - Carol I Blvd., 700506 Iași (Romania)

▪ Radiochemistry, Nuclear chemistry, Nuclear fuels

10/1997 - 06/1999

M.Sc.

"Alexandru Ioan Cuza" (University), 11 - Carol I Blvd., 700506 Iași (Romania)

▪ Solid state chemistry

09/1992 - 06/1997

B.Sc.

"Alexandru Ioan Cuza" (University), 11 - Carol I Blvd., 700506 Iași (Romania)

▪ Chemistry

PERSONAL SKILLS

Mother tongue(s)

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	B2	B2	B2	B2	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

ADDITIONAL INFORMATION

- Habilitation in Chemistry, issued by the *Romanian Ministry of Education and Scientific Research* (2013). Affiliated to the Doctoral School of Chemistry, "Alexandru Ioan Cuza" University of Iași / Romania (2013-present)
- Over 130 publications in peer-reviewed journals of inorganic, nuclear and radiochemistry, environmental chemistry and material science, h-index= 32(25)
- Project/task manager for national and European grants in the nuclear field
- Postgraduate studies on Dosimetry and Radioprotection (University of Bucharest, 2001)
- National (Romania) radiation protection expert (2012-2017)
- Peer review activities for journals in the nuclear field and various grant agencies
- "Gheorghe Spacu" Award of the Romanian Academy (2008)
- JRC Award for Excellence for the best innovation / technological development (2018)

List of publications

1. A. Cecal, A. Gulea, V. Rudic, I. Palamaru, D. Humelnicu, K. Popa, "Bioakkumulation von UO_2^{2+} und Th^{4+} -ionen aus abwässern", *Isot. Environ. Health S.* **33** (1997) 327-331.
2. A. Cecal, I. Palamaru, K. Popa, I. Cărauş, V. Rudic, A. Gulea, "Accumulation of $^{60}\text{Co}^{2+}$ and UO_2^{2+} ions on hydrophilic plants", *Isot. Environ. Health S.* **35** (1999) 213-219.
3. A. Cecal, D. Humelnicu, K. Popa, V. Rudic, A. Gulea, I. Palamaru, G. Nemţoi, "Bioleaching of uranium (VI) from poor uranium ores by means of cyanobacteria", *J. Radioanal. Nucl. Chem.* **245** (2000) 427-429.
4. A. Cecal, I. Palamaru, K. Popa, V. Rudic, A. Gulea, "Spectrophotometric studies on the metallic ions bioaccumulation on algae", *Rev. Chim. (Bucharest)* **52** (2001) 495-499.
5. A. Cecal, K. Popa, " $^{204}\text{Tl}^+$ ions adsorption from the low radioactive solutions on *Lemna minor*", *Rev. Chim. (Bucharest)* **52** (2001) 382-385.
6. K. Popa, V. Brandel, A. Cecal, "Synthèse et caractérisation de ReP_2O_7 et des solutions solides $\text{Zr}_{1-x}\text{Re}_x\text{P}_2\text{O}_7$ ", *Rev. Roum. Chim.* **46** (2001) 509-515.
7. A. Cecal, M. Goanţă, M.N. Palamaru, T. Stoicescu, K. Popa, A.O. Paraschivescu, V. Aniţa, "Utilization of some oxides in water's radiolytical decomposition", *Radiat. Phys. Chem.* **62** (2001) 333-336.
8. A. Cecal, K. Popa, I.I. Crăciun, V. Potoroacă, A.R. Iordan, I. Cărauş, "Bioaccumulation in hydrophytes plants of some microelements from alkaline sludge resulting from uranium ores processing", *Rev. Chim. (Bucharest)* **53** (2002) 290-293.
9. A. Cecal, K. Popa, D. Simon, I. Cărauş, "On the bioaccumulation *Spirulina platensis* - $^{60}\text{Co}^{2+}$ system", *Rev. Roum. Chim.* **47** (2002) 861-867.
10. A. Cecal, K. Popa, I. Cărauş, V. Potoroacă, "Bioaccumulation of $^{65}\text{Zn}^{2+}$ ions on some hydrophilic plants", *Isot. Environ. Health S.* **38** (2002) 33-37.
11. A. Cecal, K. Popa, V. Potoroacă, N. Melniciuc-Puică, "Decontamination of radioactive liquid wastes by hydrophilic vegetal organisms", *J. Radioanal. Nucl. Chem.* **251** (2002) 257-261.
12. A. Cecal, K. Popa, M.L. Craus, S. Paţachia, R.T. Moraru, "On the bioleaching of UO_2^{2+} ions from a Romanian poor uranium ore", *J. Radioanal. Nucl. Chem.* **254** (2002) 81-84.
13. K. Popa, A. Cecal, "A review on biosorption of uranyl ions", *Environm. Eng. Manag. J.* **2** (2003) 69-75.
14. A. Cecal, K. Popa, S. Chişcă, A.I. Balan, S. Paţachia, "Radiokinetic study on the growth of some crystals containing $^{204}\text{Tl}^+$ ions in macromolecular gels", *Rev. Chim. (Bucharest)* **54** (2003) 731-733.
15. A. Cecal, K. Popa, S. Chişcă, A.I. Balan, A.R. Iordan, "Kinetic investigation of the nucleation process in the systems: $^{204}\text{Tl}^+\text{-CrO}_4^{2-}$, $^{204}\text{Tl}^+\text{-H}_2\text{PO}_4^-$ and $^{204}\text{Tl}^+\text{-IO}_3^-$ in gelatine", *Rev. Roum. Chim.* **48** (2003) 357-360.
16. K. Popa, A. Cecal, G. Drochioiu, A. Pui, D. Humelnicu, "*Saccharomyces cerevisiae* as uranium bioaccumulating material: Contact time, pH and anion nature influence", *Nukleonika* **48** (2003) 121-125.
17. C.C. Pavel, K. Popa, N. Bîlbă, A. Cecal, D.G. Cozma, A. Pui, "Study of sorption of some radiocations on microporous titanosilicate ETS-10", *J. Radioanal. Nucl. Chem.* **258** (2003) 243-248.
18. A. Cecal, A.O. Paraschivescu, K. Popa, D. Colisnic, G. Timco, L.D. Sîngorean, "Radiolytic splitting of water molecules in the presence of some supramolecular compounds", *J. Serb. Chem. Soc.* **68** (2003) 593-598.
19. A. Cecal, D. Colisnic, K. Popa, A.O. Paraschivescu, N. Bîlbă, D.G. Cozma, "Hydrogen yield from water radiolysis in the presence of some zeolites", *Central Eur. J. Chem.* **2** (2004) 247-253.
20. K. Popa, A. Cecal, D. Humelnicu, I. Cărauş, C.L. Drăghici, "Removal of $^{60}\text{Co}^{2+}$ and $^{137}\text{Cs}^+$ ions from low radioactive solutions using *Azolla caroliniana* Willd. water fern", *Central Eur. J. Chem.* **2** (2004) 434-445.
21. K. Popa, D.I. Cucurean, G. Nemţoi, A. Cecal, D. Simon, V. Rudic, L. Cepoi, A. Gulea, "Removal of UO_2^{2+} ions using *Spirulina platensis* (Nordst.) Geitl. as a biopurifier", *Int. J. Algae* **6** (2004) 74-81 (publicată în original în limba rusă, *Algologia* **13** (2003) 34-41).
22. D. Humelnicu, G. Drochioiu, K. Popa, "The bioaccumulation of thorium and uranyl ions on *Saccharomyces cerevisiae*", *J. Radioanal. Nucl. Chem.* **260** (2004) 291-293.
23. G. Drochioiu, I. Mangalagiu, E. Avram, K. Popa, A.C. Dîrţu, I. Druţă, "Cyanide reaction with ninhydrin: elucidation of reaction and interference mechanisms", *Anal. Sci.* **20** (2004) 1443-1447.
24. G. Drochioiu, I. Mangalagiu, K. Popa, E. Avram, R. Molnar, I. Druţă, "A novel reaction of cyanide with 2,2-dihydroxy-1,3-indanedione", *Rev. Roum. Chim.* **50** (2005) 53-59.
25. A. Cecal, K. Popa, C.L. Drăghici, "Study of the corrosion reactions by means of a radiochemical method", *Radiochim. Acta* **93** (2005) 115-117.
26. K. Popa, R.J.M. Konings, P. Boulet, D. Bouëxière, A.F. Popa, "The high temperature behaviour of barium zirconium diorthophosphate", *Thermochim. Acta* **436** (2005) 51-55.
27. K. Popa, C.C. Pavel, N. Bîlbă, A. Cecal, "Purification of waste waters containing $^{60}\text{Co}^{2+}$, $^{115m}\text{Cd}^{2+}$ and $^{203}\text{Hg}^{2+}$ radioactive ions by ETS-4 microporous titanosilicate", *J. Radioanal. Nucl. Chem.* **269** (2006) 155-160.
28. D. Humelnicu, G. Drochioiu, M.I. Sturza, A. Cecal, K. Popa, "Kinetic and thermodynamic aspects of U(VI) and Th(IV) sorption on a zeolitic volcanic tuff", *J. Radioanal. Nucl. Chem.* **270** (2006) 637-640.
29. K. Popa, M.N. Palamaru, A.R. Iordan, D. Humelnicu, G. Drochioiu, A. Cecal, "Laboratory analysis of $^{60}\text{Co}^{2+}$, $^{65}\text{Zn}^{2+}$ and $^{55+59}\text{Fe}^{3+}$ radiocations uptake by *Lemna minor*", *Isot. Environ. Health S.* **42** (2006) 87-95.
30. K. Popa, R.J.M. Konings, "High temperature heat capacities of EuPO_4 and SmPO_4 synthetic monazites", *Thermochim. Acta* **445** (2006) 49-52.
31. K. Popa, R.J.M. Konings, O. Beneš, T. Geisler, A.F. Popa, "Thermodynamic and spectroscopic studies on the phase transition of $\text{BaHf}(\text{PO}_4)_2$ ", *Thermochim. Acta* **451** (2006) 1-4.
32. K. Popa, D. Sedmidubský, O. Beneš, C. Thiriet, R.J.M. Konings, "The high temperature heat capacity of LnPO_4 ($\text{Ln} = \text{La}, \text{Ce}, \text{Gd}$) by drop calorimetry", *J. Chem. Thermodynamics* **38** (2006) 825-829.
33. K. Popa, F. Jutier, F. Wastin, R.J.M. Konings, "The heat capacity of NdPO_4 ", *J. Chem. Thermodynamics* **38** (2006) 1306-1311.
34. T. Geisler, K. Popa, R.J.M. Konings, A.F. Popa, "A Raman spectroscopic study of the phase transition of $\text{BaZr}(\text{PO}_4)_2$: evidence for a trigonal structure of the high-temperature polymorph", *J. Solid State Chem.* **179** (2006) 1489-1495.
35. A. Cecal, A.I. Balan, N. Melniciuc-Puică, K. Popa, D. Ţîmpu, "Radiokinetic investigation on the crystallization process from aqueous solutions using β -ray backscattering", *Rev. Chim. (Bucharest)* **38** (2007) 895-898.
36. K. Popa, H. Leiste, T. Wiss, R.J.M. Konings, "Hydrothermal alteration of $\text{Ba}_x\text{M}^{IV}_{1-x}\text{Ce}_{2-2x}(\text{PO}_4)_2$ ($\text{M}^{IV} = \text{Zr}, \text{Hf}$) monazites as hosts for minor actinides", *J. Radioanal. Nucl. Chem.* **273** (2007) 563-567.
37. K. Popa, F. Wastin, E. Colineau, R.J.M. Konings, "The heat capacity of BaUO_4 ", *J. Chem. Thermodynamics* **39** (2007) 104-107.
38. K. Popa, R.J.M. Konings, T. Geisler, "High temperature calorimetry of $(\text{La}_{1-x}\text{Ln}_x)\text{PO}_4$ solid solutions", *J. Chem. Thermodynamics* **39** (2007) 236-239.
39. K. Popa, D. Bregiroux, R.J.M. Konings, A.F. Popa, T. Gouder, T. Geisler, P.E. Raison, "The chemistry of phosphates of barium and tetravalent cations in the 1:1 stoichiometry", *J. Solid State Chem.* **180** (2007) 2346-2355.
40. K. Popa, F. Wastin, E. Colineau, R.J.M. Konings, "The low-temperature heat capacity of $\text{Pu}_{0.1}\text{La}_{0.9}\text{PO}_4$ ", *Solid State Commun.* **144** (2007) 74-77.
41. K. Popa, M. Murariu, R. Molnar, G. Schlosser, A. Cecal, G. Drochioiu, "Effect of radioactive and non-active mercury on wheat germination and the anti-toxic role of glutathione", *Isot. Environ. Health S.* **43** (2007) 105-116.
42. G. Drochioiu, K. Popa, D. Humelnicu, M. Murariu, I. Sandu, A. Cecal, "Comparison of various sensitive and selective spectrophotometric assays of environmental cyanide", *Toxicol. Environ. Chem.* **90** (2008) 221-235.

43. A. Cecal, A.I. Balan, N. Melniciuc-Puică, K. Popa, "Radiochemical method based on the backscattered β -rays for the study of nucleation process", *Rev. Roum. Chim.* **53** (2008) 73-77.
44. A. Cecal, A. Macovei, G. Tamba, O. Haută, K. Popa, D. Gânju, I. Rusu, "On the hydrogen production by catalysed radiolysis of water", *Rev. Roum. Chim.* **53** (2008) 203-206.
45. A. Cecal, F. Ionică, K. Popa, "Kinetic investigations of the corrosion process by means of the β -rays absorption", *Rev. Chim. (Bucharest)* **59** (2008) 1234-1236.
46. K. Popa, R. Tykva, E. Podracká, D. Humelnicu, " ^{226}Ra translocation from soil to spontaneous vegetation growing in the Crucea (Romania) uranium mining area", *J. Radioanal. Nucl. Chem.* **278** (2008) 211-213.
47. K. Popa, R.J.M. Konings, F. Wastin, E. Colineau, N. Magnani, P.E. Raison, "A re-evaluation of the heat capacity of cerium zirconate ($\text{Ce}_2\text{Zr}_2\text{O}_7$) from (2 to 1550) K", *J. Phys. Chem. Solids* **69** (2008) 70-75.
48. P.E. Raison, R. Jardin, D. Bouëxière, R.J.M. Konings, T. Geisler, C.C. Pavel, J. Rebizant, K. Popa, "Structural investigation of $\text{CaAn}(\text{PO}_4)_2$ ($\text{An} = \text{Th, Np}$) cheralite-like compounds", *Phys. Chem. Minerals* **35** (2008) 603-609.
49. R. Jardin, C.C. Pavel, P.E. Raison, D. Bouëxière, H. Santa-Cruz, R.J.M. Konings, K. Popa, "The high temperature behaviour of PuPO_4 monazite and of some other related compounds", *J. Nucl. Mater.* **378** (2008) 167-171.
50. R.J.M. Konings, K. Popa, E. Colineau, F. Wastin, "The low-temperature heat capacity of CaUO_4 and SrUO_4 ", *J. Chem. Thermodynamics* **40** (2008) 220-224.
51. R.J.M. Konings, K. Popa, F. Wastin, E. Colineau, "The low-temperature heat capacity and standard entropy of synthetic huttonite ThSiO_4 ", *J. Chem. Thermodynamics* **40** (2008) 931-934.
52. R.J.M. Konings, M. Walter, K. Popa, "The excess properties of the $\text{Ln}_{2-2x}\text{Ca}_x\text{Th}_x(\text{PO}_4)_2$ ($\text{Ln} = \text{La, Ce}$) solid solutions", *J. Chem. Thermodynamics* **40** (2008) 1305-1308.
53. K. Popa, T. Shvareva, L. Mazeina, E. Colineau, F. Wastin, R.J.M. Konings, A. Navrotsky, "Thermodynamic properties of $\text{CaTh}(\text{PO}_4)_2$ synthetic cheralite", *Am. Mineral.* **93** (2008) 1356-1362.
54. C.C. Pavel, M. Walter, K. Popa, "The improvement of retention capacity of ETS-10 towards uranyl ions by porosity modification and their immobilization into a titanosilicate matrix", *J. Mater. Chem.* **18** (2008) 3342-3346.
55. R. Grădinaru, S.O. Vălu, Ș. Postolache, C.C. Pavel, I. Sandu, K. Popa, "On the influence of ETS-10 porosity and surface properties in retention of some nanoions and nanomolecules", *Environm. Eng. Manag. J.* **8** (2009) 901-905.
56. C.C. Pavel, L.V. Pavel, I. Crețescu, K. Popa, "Some aspects concerning the U(VI) uptake on ETS-10 titanosilicate", *Rev. Chim. (Bucharest)* **60** (2009) 19-22.
57. M. Murariu, K. Popa, E.S. Drăgan, G. Drochioiu, "Synthetic cysteine-peptide and its relation with heavy and radioactive metals", *Rev. Roum. Chim.* **54** (2009) 741-747.
58. A. Cecal, F. Ionică, G. Nemțoi, K. Popa, "Use of β -rays absorption in the study of the steel corrosion", *Rev. Roum. Chim.* **54** (2009) 1127-1132.
59. R. Tykva, J. Novák, E. Podracká, K. Popa, "Bioaccumulation of uranium from waste water using different strains of *Saccharomyces cerevisiae*", *Nukleonika* **54** (2009) 143-148.
60. M. Ayranov, J. Cobos, K. Popa, V.V. Rondinella, "Determination of Ba, Zr, U, Th and REE in simulated hydrogeological leachates by ICP-OES after matrix solvent extraction", *J. Rare Earths* **27** (2009) 123-127.
61. R. Tykva, K. Salahel Din, C.C. Pavel, A. Cecal, K. Popa, "Contribution to the external surface of a titanium-rich sand (Abou-Khashaba, Egypt) in the uranium uptake process", *J. Radioanal. Nucl. Chem.* **279** (2009) 811-816.
62. C. Tănase, A. Pui, A. Oprea, K. Popa, "Translocation of radioactivity from substrate to macromycetes in the Crucea (Romania) uranium mining area", *J. Radioanal. Nucl. Chem.* **281** (2009) 563-567.
63. D. Bregiroux, K. Popa, R. Jardin, P.E. Raison, G. Wallez, M. Querton, M. Brunelli, C. Ferrero, R. Caciuffo, "Crystal structure and thermal expansion of the low- and high-temperature forms of $\text{BaM}^{\text{IV}}(\text{PO}_4)_2$ ($\text{M}^{\text{IV}} = \text{Ti, Zr, Hf, and Sn}$)", *J. Solid State Chem.* **182** (2009) 1115-1120.
64. D.T. Costin, C.C. Nica, D.G. Cozma, A. Cecal, K. Popa, "Monitoring of several radioisotopes in soils and plants in uranium mining areas", *Environm. Eng. Manag. J.* **9** (2010) 275-279.
65. D.T. Costin, R.V. Grădinaru, G. Nemțoi, K. Popa, "Insights on the $^{204}\text{Tl}^+$ - *Escherichia coli* system", *Rev. Roum. Chim.* **55** (2010) 153-156.
66. A. Borhan, B. Apetrăchioaei, K. Popa, "On the existence of the cerium(IV) phosphate, $\text{Ce}_3(\text{PO}_4)_4$ ", *Rev. Roum. Chim.*, **55** (2010) 389-393.
67. D. Humelnicu, A. Cecal, K. Popa, "The effect of α radiolysis on the U(IV)/U(VI) ratio in uranium bearing ores", *Rev. Roum. Chim.*, **55** (2010) 979-982.
68. K. Popa, A. Pui, C. Tănase, R. Irimia, "Monitoring of ^{226}Ra and ^{137}Cs radioisotopes on Bistrita Valley and their translocation in spontaneous macromycetes", *Rev. Chim. (Bucharest)* **61** (2010) 894-896.
69. P.E. Raison, C.C. Pavel, R. Jardin, E. Suard, R. Haire, K. Popa, "Thermal expansion behaviour of $\text{Ce}_2\text{Zr}_2\text{O}_7$ up to 898 K in conjunction with structural analysis by neutron diffraction", *Phys. Chem. Minerals* **37** (2010) 555-559.
70. S. Surblé, S. Heatman, P. Raison, D. Bouëxière, K. Popa, R. Caciuffo, "Pressure-induced structural transition in lanthanoid zirconate pyrochlores", *Phys. Chem. Minerals* **37** (2010) 761-767.
71. K. Popa, G. Wallez, P.E. Raison, D. Bregiroux, C. Apostolidis, P. Lindqvist-Reis, R.J.M. Konings, " $\text{Sr}^{\text{IV}}\text{PO}_4$: an original ordered modification of cheralite", *Inorg. Chem.* **49** (2010) 6904-6908.
72. C. Borgia, K. Popa, C.C. Pavel, A. Dascălu, C. Vițelaru, B.A. Apetrăchioaei, "Sorption of thallos ion from acidic aqueous solutions onto as-made and modified ETS-10", *J. Radioanal. Nucl. Chem.* **288** (2011) 25-30.
73. C.C. Pavel, M. Walter, P. Pöml, D. Bouëxière, K. Popa, "Contrasting immobilization behaviour of Cs^+ and Sr^{2+} cations into a titanosilicate matrix", *J. Mater. Chem.* **21** (2011) 3831-3837.
74. O. Beneš, K. Popa, V. Reuscher, A. Zappia, D. Staicu, R.J.M. Konings, "High temperature heat capacity of PuPO_4 monazite-analogue", *J. Nucl. Mater.* **418** (2011) 182-185.
75. G. Wallez, D. Bregiroux, K. Popa, P.E. Raison, C. Apostolidis, P. Lindqvist-Reis, R.J.M. Konings, A.F. Popa, "The $\text{BaAn}^{\text{IV}}(\text{PO}_4)_2$ ($\text{An}^{\text{IV}} = \text{Th, Np}$): a new family of layered double phosphates", *Eur. J. Inorg. Chem.* (2011) 110-115.
76. F. Tudorache, K. Popa, L. Mitușeru, N. Lupu, D. Bregiroux, G. Wallez, "Dielectric investigation of $\text{M}^{\text{II}}\text{M}^{\text{IV}}(\text{PO}_4)_2$ double orthophosphates ($\text{M}^{\text{II}} = \text{Ca, Sr, Ba, Pb}$; $\text{M}^{\text{IV}} = \text{Ti, Zr, Hf, Ge, Sn}$)", *J. Alloys Compd.* **37** (2011) 9127-9132.
77. K. Popa, G. Wallez, D. Bregiroux, P. Loiseau, " $\text{M}^{\text{II}}\text{Ge}(\text{PO}_4)_2$ ($\text{M}^{\text{II}} = \text{Ca, Sr, Ba}$): crystal structure, thermal expansion and phase transition", *J. Solid State Chem.* **184** (2011) 2629-2634.
78. K. Popa, C.C. Pavel, "Radioactive wastewaters purification using titanosilicates materials: state of the art and perspectives", *Desalination* **293** (2012) 78-86.
79. G. Wallez, P.E. Raison, N. Dacheux, N. Clavier, D. Bykov, L. Delevoye, K. Popa, D. Bregiroux, A.N. Fitch, R.J.M. Konings, "Triclinic-cubic phase transition and negative thermal expansion in the actinide IV (Th, U, Np, Pu) diphosphates", *Inorg. Chem.* **51** (2012) 4314-4322.
80. P.E. Raison, S. Heathman, G. Wallez, C.E. Zvoriste, D. Bykov, G. Ménard, E. Suard, K. Popa, N. Dacheux, R.J.M. Konings, R. Caciuffo, "Structure and nuclear density distribution in the cheralite - $\text{CaTh}(\text{PO}_4)_2$: studies of its behaviour under high pressure (36 GPa)", *Phys. Chem. Minerals* **39** (2012) 685-692.
81. K. Popa, "Sorption of uranium on lead hydroxyapatite", *J. Radioanal. Nucl. Chem.* **298** (2013) 1527-1532.
82. C.C. Pavel, K. Popa, "Investigations of the ion exchange process of Cs^+ and Sr^{2+} by ETS materials", *Chem. Eng. J.* **245** (2014) 288-294.

83. F. Tudorache, I. Petrila, K. Popa, A.M. Catargiu, "Electrical properties and humidity sensors characteristics of lead hydroxyapatite material", *Appl. Surf. Sci.* **303** (2014) 175-179.
84. K. Popa, O. Beneš, J.-C. Griveau, P. Pöml, P. Raison, E. Colineau, R.J.M. Konings, J. Somers, "Heat capacity of Bi_2UO_6 ", *J. Nucl. Mater.* **465** (2015) 653-656.
85. J.-F. Vigier, K. Popa, D. Freis, V. Tyrpekl, S. Gardeur, J. Somers, "Interaction studies between MOX and eutectic lead-bismuth coolant", *J. Nucl. Mater.* **467** (2015) 840-847.
86. D. Bregiroux, G. Wallez, K. Popa, "Structural study of polymorphism and thermal behaviour of $\text{CaZr}(\text{PO}_4)_2$ ", *Solid State Sci.* **41** (2015) 43-47.
87. D. Bregiroux, K. Popa, G. Wallez, "Crystal chemistry of $M^{\text{III}}M^{\text{IV}}(\text{PO}_4)_2$ double mono-phosphates", *J. Solid State Chem.* **230** (2015) 26-33.
88. K. Popa, P.E. Raison, L. Martel, P.M. Martin, D. Prieur, P.L. Solari, D. Bouëxière, J. Somers, "Structural investigations of Pu^{III} phosphate by X-ray diffraction, MAS-NMR and XANES spectroscopy", *J. Solid State Chem.* **230** (2015) 169-174.
89. T. Geisler, K. Popa, R.J.M. Konings, "Evidence for lattice strain and non-ideal behavior in the $(\text{La}_{1-x}\text{Eu}_x)\text{PO}_4$ solid solution from X-ray diffraction and vibrational spectroscopy", *Front. Earth Sci.* **4** (2016) 64.
90. O. Walter, K. Popa, O. Dieste Blanco, "Hydrothermal decomposition of actinide(IV) oxalates: a new aqueous route towards reactive actinide oxide nanocrystals", *Open Chem.* **14** (2016) 170-174.
91. C. Borgia, K. Popa, A. Cecal, M. Murariu, "Improved fluorimetric measurement of uranium uptake and distribution in spring wheat (*Triticum aestivum* L.)", *Radiochim. Acta* **104** (2016) 315-320.
92. K. Popa, O. Beneš, D. Staicu, J.-C. Griveau, E. Colineau, P.E. Raison, J.-F. Vigier, G. Paglosa, M. Sierig, O. Vălu, J. Somers, R.J.M. Konings, "Thermal properties of PbUO_4 and Pb_3UO_6 ", *J. Nucl. Mater.* **479** (2016) 189-194.
93. I. Petrila, K. Popa, F. Tudorache, "Microstructure, electrical and humidity sensing properties of light rare earth zirconates", *Sensor Actuat. A Phys.* **247** (2016) 156-161.
94. K. Popa, M. Cologna, L. Martel, D. Staicu, A. Cambriani, M. Ernstberger, P.E. Raison, J. Somers, " $\text{CaTh}(\text{PO}_4)_2$ cheralite as a candidate ceramic waste form: spark plasma sintering stabilisation and physicochemical characterisation", *J. Eur. Ceram. Soc.* **36** (2016) 4115-4121.
95. K. Popa, D. Prieur, D. Manara, M. Naji, J.-F. Vigier, P.M. Martin, O. Dieste Blanco, A.C. Scheinost, T. Prüßmann, T. Vitova, P.E. Raison, J. Somers, R.J.M. Konings, "Further insights into the chemistry of the Bi-U-O system", *Dalton Trans.* **45** (2016) 7847-7855.
96. S.M. Butorin, K.O. Kvashnina, A.L. Smith, K. Popa, P.M. Martin, "Crystal-field and covalency effects in uranates: X-ray spectroscopic study", *Chem. Eur. J.* **22** (2016) 9693-9698.
97. Y. Arinicheva, K. Popa, A.C. Scheinost, A. Rossberg, O. Dieste Blanco, P.E. Raison, A. Cambriani, J. Somers, D. Bosbach, S. Neumeier, "Structural investigations of $(\text{La,Pu})\text{PO}_4$ monazite solid solutions: XRD and XAFS study", *J. Nucl. Mater.* **493** (2017) 404-411.
98. A.L. Smith, E. Colineau, J.-C. Griveau, K. Popa, G. Kauric, P.M. Martin, A.C. Scheinost, A. Cheetham, R.J.M. Konings, "A new look at the structural and magnetic properties of potassium neptunate K_2NpO_4 combining XRD, XANES spectroscopy and low temperature heat capacity", *Inorg. Chem.* **56** (2017) 5839-5850.
99. L. Martel, M. Naji, J.-F. Vigier, K. Popa, J. Somers, "Fingerprint of local disorder in long range ordered isometric pyrochlores", *Sci. Reports* **7** (2017) 12269:1-8.
100. K. Popa, O. Beneš, D. Staicu, J.-C. Griveau, E. Colineau, A. Seibert, J.-Y. Colle, S. Stohr, P.E. Raison, J. Somers, R.J.M. Konings, "Heat capacity, thermal expansion, and thermal diffusivity of NaUO_2BO_3 ", *J. Therm. Anal. Calorim.* **132** (2018) 343-351.
101. L. Balice, D. Bouëxière, M. Cologna, A. Cambriani, J.-F. Vigier, E. De Bona, G.D. Soraru, C. Kübel, O. Walter, K. Popa, "Nano and micro $\text{U}_{1-x}\text{Th}_x\text{O}_2$ solid solutions ($x=0$ to 1): from powders to pellets", *J. Nucl. Mater.* **498** (2018) 307-313.
102. M. Cerini, O. Beneš, K. Popa, E. Macerata, J.-C. Griveau, E. Colineau, M. Mariani, R.J.M. Konings, "Thermodynamic properties of $\text{Pb}_3\text{U}_{11}\text{O}_{36}$ ", *J. Nucl. Mater.* **510** (2018) 38-42.
103. K. Popa, O. Walter, O. Dieste Blanco, A. Guiot, D. Bouëxière, L. Martel, M. Naji, J.-Y. Colle, D. Manara, "A low-temperature synthesis method for AnO_2 nanocrystals ($\text{An}=\text{Th, U, Np, Pu}$) and associate solid solutions", *CrystEngComm* **20** (2018) 4614-4622.
104. D. Prieur, K. Popa, J.-F. Vigier, A.C. Scheinost, P.M. Martin, "X-ray absorption spectroscopy study of AUO_4 and A_3UO_6 ($\text{A}=\text{Ca, Sr, Ba, or Pb}$)", *J. Nucl. Mater.* **516** (2019) 303-308.
105. D. Bouëxière, K. Popa, O. Walter, M. Cologna, "Kinetic study on the grain growth of PuO_2 nanocrystals", *RSC Adv.* **9** (2019) 6542-6547.
106. E. De Bona, O. Walter, H. Störmer, T. Wiss, G. Baldinozzi, M. Cologna, K. Popa, "Synthesis of nanostructured ThO_2 pellets", *J. Am. Ceram. Soc.* **102** (2019) 3814-3818.
107. J.-F. Vigier, K. Popa, L. Martel, D. Manara, O. Dieste Blanco, D. Freis, R.J.M. Konings, "Plutonium and americium aluminate perovskites", *Inorg. Chem.* **58** (2019) 9118-9126.
108. L. Martel, A. Rakhmatullin, J.J. Baldoví, M. Perfetti, K. Popa, M. Deschamps, T. Gouder, E. Colineau, A. Kovács, J.-C. Griveau, "Local structure and magnetism of $\text{La}_x\text{Eu}_{1-x}\text{PO}_4$ solid solutions", *Phys. Rev. B* **100** (2019) 054412:1-17.
109. S.O. Vălu, E. De Bona, K. Popa, J.-C. Griveau, E. Colineau, R.J.M. Konings, "The effect of lattice disorder on the low-temperature heat capacity of $(\text{U}_{1-y}\text{Th}_y)\text{O}_2$ and ^{238}Pu -doped UO_2 ", *Sci. Reports* (2019) **9** (2019) 15082:1-10.
110. K. Kvashnina, A. Romanchuk, I. Pidchenko, L. Amidani, E. Gerber, A. Trigub, A. Rossberg, S. Weiss, K. Popa, O. Walter, R. Caciuffo, A.C. Scheinost, S. Butorin, S. Kalmaykov, "A novel meta-stable pentavalent plutonium solid phase on the pathway from $\text{Pu}(\text{VI})$ to PuO_2 nanoparticles", *Angew. Chem. Int. Ed.* **58** (2019) 17558-17562.
111. D. Freis, J.-F. Vigier, K. Popa, R.J.M. Konings, "Research in support of the European radio-isotope power system development at the European Commission's Joint Research Centre in Karlsruhe", *ATW – Int. J. Nucl. Power* **65** (2020) 198-205.
112. L. Martel, A. Kovács, K. Popa, D. Bregiroux, T. Charpentier, " ^{31}P MAS NMR and DFT study of crystalline phosphates matrices", *Solid State Nucl. Magn. Reson.* **105** (2020) 101639:1-9.
113. D. Prieur, W. Bonani, K. Popa, O. Walter, K.W. Kriegsman, M.H. Engelhard, X. Guo, R. Eloi, T. Gouder, A. Beck, T. Vitova, A.C. Scheinost, K. Kvashnina, P.M. Martin, "Size dependence of lattice parameters and electronic structure in CeO_2 nanoparticles", *Inorg. Chem.* **59** (2020) 5760-5767.
114. K. Popa, J.-F. Vigier, L. Martel, D. Manara, J.-Y. Colle, O. Dieste Blanco, T. Wiss, D. Freis, R.J.M. Konings, "Synthesis, characterization, and stability of AmPO_4 ", *Inorg. Chem.* **59** (2020) 6595-6602.
115. G. Kauric, O. Walter, A. Beck, B. Schacherl, O. Dieste Blanco, J.-F. Vigier, E. Zuleger, T. Vitova, K. Popa, "Synthesis and characterization of nanocrystalline $\text{U}_{1-x}\text{Pu}_x\text{O}_{2+y}$ mixed oxides", *Mater. Today Adv.* **8** (2020) 100115:1-6.
116. D. Manara, K. Popa, D. Robba, L. Fongaro, J.-Y. Colle, A. Bulgheroni, "Infrared laser absorption and melting behavior of nano-sized cerium dioxide: a laser heating study", *J. Eur. Ceram. Soc.* **41** (2021) 1384-1390.
117. E. De Bona, L. Balice, L. Cognini, M. Holzhäuser, K. Popa, O. Walter, M. Cologna, D. Prieur, T. Wiss, G. Baldinozzi, "Single step, high pressure and two-step Spark Plasma Sintering of UO_2 nanopowders", *J. Eur. Ceram. Soc.* **41** (2021) 3655-3663.
118. D. Comandella, W. Bonani, J. Bañuls-Ciscar, J. Ponti, M. Cologna, K. Popa, D. Gilliland, "Recovery of rare earth elements by nanometric CeO_2 embedded into electro-spun PVA membrane", *RSC Adv.* **11** (2021) 19351-19362.
119. L. Martel, M.A. Islam, K. Popa, J.-F. Vigier, E. Colineau, H. Bolvin, J.-C. Griveau, "Local structure and magnetism of $\text{La}_{1-x}\text{M}_x\text{PO}_4$ ($\text{M}=\text{Sm, }^{239}\text{Pu, }^{241}\text{Am}$) explained by experimental and computational analyses", *J. Phys. Chem. C* **125** (2021) 22163-22174.
120. D. Prieur, J.-F. Vigier, K. Popa, O. Walter, O. Dieste Blanco, Z. Varga, T. Vitova, A. Beck, A.C. Scheinost, P.M. Martin, "Charge distribution in $\text{U}_{1-x}\text{Ce}_x\text{O}_{2+y}$ nanoparticles", *Inorg. Chem.* **60** (2021) 14550-14556.

121. L. Amidani, M. Retegan, A. Volkova, K. Popa, P.M. Martin, K.O. Kvashnina, "Probing the local coordination of hexavalent uranium and the splitting of 5f orbitals induced by chemical bonding", *Inorg. Chem.* **60** (2021) 16286-16293.
122. E. De Bona, K. Popa, O. Walter, M. Cologna, C. Hennig, A.C. Scheinost, D. Prieur, "Oxidation of micro- and nanograined UO_2 pellets by in-situ synchrotron X-ray diffraction", *Inorg. Chem.* **61** (2022) 1843-1850.
123. A. Margueret, L. Balice, K. Popa, M. Holzhäuser, E. De Bona, W. Bonani, A. Bulgheroni, F. Audubert, M. Cologna, "Spark plasma sintering of UO_2 nanopowders: pressure, heating rate and current effects", *J. Eur. Ceram. Soc.* **42** (2022) 156-166.
124. J.-F. Vigier, D. Freis, O. Walter, O. Dieste Blanco, D. Bouëxière, E. Zuleger, T. Vitova, N. Palina, R.J.M. Konings, K. Popa, "Synthesis and characterization of homogeneous $(\text{U},\text{Am})\text{O}_2$ and $(\text{U},\text{Pu},\text{Am})\text{O}_2$ nanopowders", *CrystEngComm* **24** (2022) 6338-6348.
125. J.-C. Griveau, J.-F. Vigier, K. Popa, S.O. Vălu, E. Colineau, R.J.M. Konings, "Low-temperature heat capacity and magnetism in $\text{U}_{1-y}\text{Ln}_y\text{O}_2$ ($\text{Ln} = \text{La}, \text{Nd}$) and $\text{U}_{1-y}\text{Am}_y\text{O}_2$ ($y = 0.01 - 0.05$) solid solutions: effect of substitution and self-irradiation", *J. Appl. Phys.* **132** (2022) 185103:1-13.
126. V. Baumann, K. Popa, M. Rivenet, G. Senentz, B. Morel, R.J.M. Konings, "Synthesis of nanocrystalline PuO_2 by hydrothermal and thermal decomposition of Pu(IV) oxalate: A comparative study", *Nanomaterials* **13** (2023) 240:1-10.
127. V. Baumann, K. Popa, M. Cologna, M. Rivenet, O. Walter, "Grain growth of NpO_2 and UO_2 nanocrystals", *RSC Adv.* **13** (2023) 6414-6421.
128. J.-F. Vigier, T. Wiss, N. Palina, T. Vitova, J.-Y. Colle, D. Bouëxière, D. Freis, R.J.M. Konings, K. Popa, "Synthesis, characterization, and stability of two americium vanadates, AmVO_3 and AmVO_4 ", *Inorg. Chem.* **62** (2023) 9350-9359.
129. V. Kundrat, H. Cohen, A.-E. Kossoi, W. Bonani, L. Houben, J. Zálešák, B. Wu, Z. Sofer, K. Popa, R. Tenne, "Encapsulation of uranium oxide in multiwall WS_2 nanotubes", *Small* **20** (2024) 2307684:1-9.
130. D. Prieur, J.-F. Vigier, V. Baumann, K. Popa, E. De Bona, H. Hein, K. Dardenne, J. Rothe, A. Beck, T. Vitova, M. Cologna, "Synthesis and characterization of Ru doped UO_2 ", *MRS Adv.* **10** (2025) 2188-2192.
131. E.D. Mooren, W. Bonani, K. Popa, S. Van Winkel, R. Alvarez-Sarandes, R.J.M. Konings, G. Beersaerts, S. Schreurs, W. Schroeyers, "Immobilization of uranium-contaminated liquid waste in an alkali-activated material and subsequent leaching behaviour", *J. Radioanal. Nucl. Chem.* **334** (2025) 3505-2514.
132. S.O. Vălu, W. Bonani, J. Boshoven, K. Popa, M. Cologna, "Influence of the thorium dioxide synthesis method on conventional and spark plasma sintering", *CrystEngComm* **27** (2025) 6213-6224.
133. J. Boshoven, J.-F. Vigier, P. Pöml, A. Ndiaye, B. Morel, R.J.M. Konings, K. Popa, M. Cologna, "Low-temperature sintering of $(\text{U},\text{Pu})\text{O}_2$ in mild oxidative conditions", *J. Nucl. Mater.* **610** (2025) 155800:1-7.
134. J. Boshoven, A. Ndiaye, B. Morel, M. Cologna, J.-F. Vigier, R. Carlos Marquez, R.J.M. Konings, K. Popa, " $\text{U}_{0.89}\text{Pu}_{0.11}\text{O}_2$ mixed oxide by use of PuO_2 nanopowders", *J. Nucl. Mater.* **614** (2025) 155914:1-7.
135. J.-F. Vigier, D. Freis, R.J.M. Konings, J. Manaud, P.E. Raison, P. Lajarge, S. Gardeur, S.O. Vălu, J.-C. Griveau, K. Popa, "Advancement in Am-based ceramics for Radioisotope Power Systems: Material selection, fabrication and thermoelectric effect demonstration", *Mater. Today Chem.* **50** (2025) 103148:1-11.
136. A. van Hattem, K. Popa, G. Wallez, J. Boshoven, E. Colineau, E. Dahms, J.-C. Griveau, H. Hein, O. Walter, B. Schacherl, T. Vitova, K. Dardenne, T. Prüßmann, J. Rothe, A.L. Smith, R.J.M. Konings, "Structural and physical investigation of ordered Ba-deficient Ba_3PuO_6 ", *Commun. Chem.* **8** (2025) 270:1-12.
137. B. Schacherl, M. Tagliavini, H. Kaufmann-Heimeshoff, J. Göttlicher, M. Mazzanti, K. Popa, O. Walter, T. Prüßmann, C. Vollmer, A. Beck, R.S.K. Ekanayake, J.A. Branson, T. Neill, D. Fellhauer, C. Reitz, D. Schild, D. Brager, C. Cahill, C. Windorff, T. Sittel, H. Ramanantoanina, M. Haverkort, T. Vitova, "Resonant inelastic X-ray scattering tools to count 5f electrons of the actinides and probe bond covalency", *Nature Commun.* **16** (2025) 1221:1-23.

December, 2025

