Eva Raudonytė-Svirbutavičienė

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2013-2018	**Ph.D. in Chemistry.** Vilnius University, Faculty of Chemistry and Geosciences. **Thesis –** Light induced synthesis of ceria-based materials and their applications for photocatalysis **Supervisor:** Prof. Dr. A. Katelnikovas, Vilnius University **Advisor:** Prof. Dr. T. Jüstel (Mūnster University of Applied Sciences)
2011-2013	**M.S. in Chemistry, *Cum laude* diploma.** Vilnius University, Faculty of Chemistry. **Thesis** – Copper determination by FAAS method **Supervisor:** Prof. Dr. S. Tautkus
2007-2011	**B.S. in Chemistry.** Vilnius University, Faculty of Chemistry**.** **Thesis –** Investigation on the potential use of industrial varnishes in the museum environment **Supervisor:** Prof. Dr. S. Tautkus**,** Dr. Jurga Bagdzevičienė

PROFESSIONAL EXPERIENCE

07 2021 – unitl now	**Postdoctoral researcher** Institute of Chemistry, Vilnius University – Vilnius, Lithuania.
02 2021 – unitl now	**Senior researcher** Nature Research Center, Laboratory of Geoenvironmental Research
04 2018 – 02 2021	**Researcher** Nature Research Center, Laboratory of Geoenvironmental Research
06 2012 – 04 2018	**Engineer** Nature Research Center, Laboratory of Geoenvironmental Research

RESEARCH INTERESTS

Synthesis and analysis of functional inorganic materials, their application for treatment of the environment, organic geochemistry, determination of pollutants in various environmental objects, seasonal and spatial changes in the distribution, dispersion and accumulation of nutrients and pollutants in water bodies and terrestrial objects.

PUBLICATIONS

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science" database (with citation index):

1. D. Griesiute, **E. Raudonyte-Svirbutaviciene**, A. Kareiva, **A. Zarkov**, The influence of annealing conditions on the Ca/P ratio and phase transformations in bulk calcium phosphates, *CrystEngComm* 24(6) **(2022)** 1166-1170.
2. R. Karalkeviciene, **E. Raudonyte-Svirbutaviciene**, J. Gaidukevic, A. Zarkov, A. Kareiva, Solvothermal Synthesis of Calcium-Deficient Hydroxyapatite via Hydrolysis of α-Tricalcium Phosphate in Different Aqueous-Organic Media, *Crystals* 12(2) **(2022)** 253.
3. **E. Raudonytė-Svirbutavičienė**, R. Stakėnienė, K. Jokšas, D. Valiulis, S. Byčenkienė, A. Žarkov, Distribution of polycyclic aromatic hydrocarbons and heavy metals in soil following a large tire fire incident: A case study, *Chemosphere* 286 (1) **(2022)** 131556.
4. A. Ranjbar Jafarabadi, M. Dashtbozorg; **E. Raudonytė-Svirbutavičienė**; A. Riyahi Bakhtiari, A potential threat to the coral reef environments: polybrominated diphenyl ethers and phthalate esters in the corals and their ambient environment (Larak Island, Persian Gulf, Iran), *Science of The Total Environment* 775 **(2021)** 145822.
5. A. Ranjbar Jafarabadi, M. Dashtbozorg **E. Raudonytė-Svirbutavičienė**, A. Riyahi Bakhtiari, Chlorinated paraffins (SCCPs and MCCPs) in corals and water-SPM-sediment system in the Persian Gulf, Iran: A potential global threat for coral reefs, *Environmental Pollution* 275 **(2021)** 116531.
6. A. Ranjbar Jafarabadi, **E. Raudonytė-Svirbutavičienė**, A. Riyahi Bakhtiari, A. Kareiva, Polycyclic Aromatic Hydrocarbons (PAHs) in corals and their ambient environment: the role of suspended particulate matter, mucus and positive matrix factorization model for identifying contributions to carcinogenicity of PAHs sources, *Science of The Total Environment* 787 **(2021)** 147688.
7. A. Ranjbar Jafarabadi, **E. Raudonytė-Svirbutavičienė**, A. Shadmehri Toosi, A. Riyahi Bakhtiari, Positive Matrix Factorization receptor model and dynamics in fingerprinting of Potentially Toxic Metals in coastal ecosystem sediments at a large scale (Persian Gulf, Iran), *Water Research* 188 **(2021)** 116509.
8. **E. Raudonytė-Svirbutavičienė**, R. Stakėnienė, I. Baužienė, K. Jokšas, Polycyclic aromatic hydrocarbons in various Lithuanian water bodies and a positive matrix factorization-based identification of pollution sources, *Baltica* 34(1) **(2021)** 17-26.
9. **E. Raudonytė-Svirbutavičienė,** R. Stakėnienė, K. Jokšas, I. Matulaitienė, L. Mikoliūnaitė, A. Žarkov, A. Kareiva, On the microplastic pollution in the sandy beaches of Šventoji, Lithuania, *Baltica* 34 (1) **(2021)** 47-57.
10. L. Sinusaite; A. Popov; **E. Raudonyte-Svirbutaviciene**; J. Chang Yang; A. Kareiva; A. Zarkov, Effect of Mn doping on hydrolysis of low-temperature synthesized metastable alpha-tricalcium phosphate, *Ceramics International* 47 (9) **(2021)** 12078-12083.
11. M. Stankevičiūtė, T. Makaras, J. Pažusienė, B. Čapukoitienė, G. Sauliutė, Ž. Jurgelėnė, **E. Raudonytė-Svirbutavičienė**, K. Jokšas, Biological effects of multimetal (Ni, Cd, Pb, Cu, Cr, Zn) mixture in rainbow trout Oncorhynchus mykiss: laboratory exposure and recovery study, *Ecotoxicology and Environmental Safety* 216 **(2021)** 112202.

12. E. Grazenaite, E. Garskaite, Z. Stankeviciute, **E. Raudonyte-Svirbutaviciene**, A.Zarkov, A. Kareiva, Ga-Substituted Cobalt-Chromium Spinels as Ceramic Pigments Produced by Sol–Gel Synthesis, *Crystals* 10(12) **(2020)** 1078.
13. D. Karoblis, R. Diliautas, **E. Raudonyte-Svirbutaviciene**, K. Mazeika, D. Baltrunas, A. Beganskiene, A. Zarkov, A. Kareiva, The synthesis and characterization of sol-gel-derived $SrTiO_3$-$BiMnO_3$ solid solutions, *Crystals* 2020, 10(12) **(2020)** 1125
14. T. Makaras, D. Montvydienė, N. Kazlauskienė, M. Stankevičiūtė, **E. Raudonytė-Svirbutavičienė**, Juvenile fish responses to sublethal leachate concentrations: comparison of sensitivity of different behavioral endpoints, *Environmental Science and Pollution Research*, 27 **(2020)** 4876–4890.
15. A. Ranjbar Jafarabadi, M. Dashtbozorg, **E. Raudonytė-Svirbutavičienė**, A. Riyahi Bakhtiari, Biomonitoring of perylene in symbiotic reef and non-reef building corals and species-specific responses in the Kharg and Larak coral reefs (Persian Gulf, Iran): Bioaccumulation and source identification, *Environmental Pollution* 267 **(2020)** 115476.
16. A. Ranjbar Jafarabadi, M. Dashtbozorg, **E. Raudonytė-Svirbutavičienė**, A. Riyahi Bakhtiari, First report on polybrominated diphenyl ethers in the Iranian Coral Islands: Concentrations, profiles, source apportionment, and ecological risk assessment, *Chemosphere* 251 **(2020)** 126397.
17. A. Ranjbar Jafarabadi, S. Mitra, E. Raudonytė-Svirbutavičienė, A. Riyahi Bakhtiari, Large-scale evaluation of deposition, bioavailability and ecological risks of the potentially toxic metals in the sediment cores of the hotspot coral reef ecosystems (Persian Gulf, Iran), *Journal of Hazardous Materials* 400 **(2020)** 122988.
18. K. Jokšas, R. Stakėnienė, **E. Raudonytė-Svirbutavičienė,** On the effectiveness of tributyltin ban: Distribution and changes in butyltin concentrations over a 9-year period in Klaipėda Port, Lithuania, *Ecotoxicology and Environmental Safety* 183 **(2019)** 109515.
19. R. Stakėnienė, K. Jokšas, A. Galkus, **E. Raudonytė-Svirbutavičienė**, Polycyclic aromatic hydrocarbons in surface sediments from the Curonian Lagoon and the Nemunas River Delta (Lithuania, Baltic Sea): distribution, origin, and suggestions for the monitoring program, *Environmental Monitoring and Assessment* 191 (4) **(2019)** 191–212.
20. R. Stakėnienė, K. Jokšas, R. Zinkutė, **E. Raudonytė-Svirbutavičienė**, Oil pollution and geochemical hydrocarbon origin markers in sediments of the Curonian Lagoon and the Nemunas River Delta, *Baltica* 32 (1) **(2019)** 22–32.
21. **E. Raudonyte-Svirbutaviciene**, A. Neagu, V. Vickackaite, V. Jasulaitiene, A. Zarkov, C.W. Tai, A. Katelnikovas, Two-step photochemical inorganic approach to the synthesis of Ag-CeO_2 nanoheterostructures and their photocatalytic activity on tributyltin degradation, *Journal of Photochemistry and Photobiology A: Chemistry* 351 **(2018)** 29-41.
22. I. Mikalauskaitė, **E. Raudonytė-Svirbutavičienė**, A. Linkevičiūtė, M. Urbonas, A. Katelnikovas, Luminescence and luminescence quenching of $Sr_3Lu_2(Si_3O_9)_2$: Ce^{3+} phosphors, *Journal of Luminescence* 184 **(2017)** 185–190.
23. **E. Raudonyte-Svirbutaviciene**, L. Mikoliunaite, Audrius Drabavicius, R. Juskenas, S. Sakirzanovas, T. Jüstel, A. Katelnikovas, Photochemical synthesis of CeO_2 nanoscale particles using sodium azide as a photoactive material: effects of the annealing temperature and polyvinylpyrrolidone addition, *RSC Advances* 6 **(2016)** 107065.
24. R. Stakėnienė, K. Jokšas, A. Galkus, **E. Raudonytė-Svirbutavičienė,** Aliphatic and polycyclic aromatic hydrocarbons in the bottom sediments from Klaipėda Harbour, Lithuania (Baltic Sea), *Chemistry and Ecology* 32 **(2016)** 357–377.
25. **E. Raudonytė-Svirbutavičienė**, H. Bettentrup, D. Uhlich, S. Šakirzanovas, O.Opuchovič, S. Tautkus, A. Katelnikovas, On the $Ce^{3+} \rightarrow Cr^{3+}$ energy transfer in $Lu_3Al_5O_{12}$ garnets, *Optical Materials* 37 **(2014)** 204–210.

Other reviewed scientific publications (books, books' chapters, collections of articles, articles, textbooks and etc.):
Book chapters:

1. E. Grazenaite, E. Garskaite, Z. Stankeviciute, **E. Raudonyte-Svirbutaviciene**, A.Zarkov, A. Kareiva. "Ga-Substituted Cobalt-Chromium Spinels as Ceramic Pigments Produced by Sol–Gel Synthesis" in "Advances in Functional Inorganic Materials Prepared by Wet Chemical Methods", edited by A. Zarkov, A. Kareiva, L. Tamasauskaite-Tamasiunaite, MDPI (2022), 5–14, ISBN 978-3-0365-5623-9.
2. D. Karoblis, R. Diliautas, **E. Raudonyte-Svirbutaviciene**, K. Mazeika, D. Baltrunas, A. Beganskiene, A. Zarkov, A. Kareiva. "The synthesis and characterization of sol-gel-derived $SrTiO_3$-$BiMnO_3$ solid solutions" in "Advances in Functional Inorganic Materials Prepared by Wet Chemical Methods", edited by A. Zarkov, A. Kareiva, L. Tamasauskaite-Tamasiunaite, MDPI (2022), 15–26, ISBN 978-3-0365-5623-9.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

2021 – 2023	Postdoctoral researcher. Post-doctoral fellowship project from Research Council of Lithuania "Simultaneous one-step synthesis of highly oriented substituted hydroxyapatite for the effective remediation of emerging water contaminants" (09.3.3-LMT-K-712-23-0070).
2017 – 2020	Engineer. National Grant from Research Council of Lithuania "Assessment of Cumulative Toxicity Impact in the aquatic organisms induced by different types of Stressors" (ACTIS) (No. S-MIP-17-10).
2016 – 2018	Researcher. Lithuanian–French Programme "Gilibert" for Bilateral Cooperation. Implemented by the Research Council of Lithuania (No. S-LZ-17-4).

INTERNSHIP AND TRAINING

2022	**Masaryk University, Brno, Czech Republic (1 month).** Doped calcium hydroxyapatite analysis using BET surface area analyzer. Scientific mentor **prof. Jiří Pinkas**. Financed by European Social Fund.
2017	**University of Artois, Lens, France (1 week).** Sample analysis using XRD, Raman techniques. Financed by Lithuanian–French Programme "Gilibert" for Bilateral Cooperation.
2017	**University of Padova, Italy (3 months).** Development and optimisation of nanoparticle and metaloorganic frameworks (MOF) synthesis methods, sample analysis using XRD, Raman, TEM techniques Scientific mentor **prof. Gaetano Granozzi**. Financed by Erasmus+ Programme.
2016	**Stockholm University, Stockholm, Sweden (4 months).** Theoretical and practical training in TEM analysis; nanostructures analysis by BF-TEM, DF-TEM, HADF-TEM. Scientific mentor **prof. Dr. Gunnar Svensson**. Financed by Erasmus+ Programme.
2016	**Stockholm University, Stockholm, Sweden (1 week).** 1-week training at Conference-school „Functional hybrid materials: structure

elucidation from molecular to macroscopic level".
Financed by COST (European Cooperation in Science and Technology).

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. **E. Raudonytė-Svirbutavičienė**, A. Beganskienė, A. Žarkov, A. Kareiva. Divalent cations as controlling agents for HA crystal growth along the specific direction. Ukrainian conference with international participation "Chemistry, physics and technology of surface" and workshop "Microwaves and nanoparticles for realtime detection of human pathogens", 19-20 October, 2022, Kyiv, Ukraine : book of abstracts. Kyiv: Chuiko Institute of Surface Chemistry of National Academy of Sciences of Ukraine, 2022. Book of abstracts: 149.
2. A. Žarkov, A. Kizalaitė, D. Griesiūtė, E. Raudonytė-Svirbutavičienė, V. Klimavičius, A. Kareiva. Phase transformations in calcium phosphates. FIM 2022: international conference "Functional inorganic materials 2022", 6-8 October, Vilnius, Lithuania. Book of abstracts: 17.
3. E. Kabašinskas, D. Griesiūtė, D. Karoblis, **E. Raudonytė-Svirbutavičienė**, A. Žarkov. Phase transformations of amorphous calcium phosphate in molten salts. Functional inorganic materials: FIM2022:international conference, 6-8 October, Vilnius, Lithuania. Book of abstracts: 63.
4. **E. Raudonytė-Svirbutavičienė**, A. Katelnikovas, A. Žarkov, A. Kareiva. Functional inorganic materials for environmental applications: synthesis and characterization. ***Invited speaker***. Advanced materials and technologies: book of abstracts of 24nd international conference - school, 22-26 August 2022, Palanga, Lithuania. Book of abstracts: 18
5. D. Griesiūtė, E. Kabašinskas, **E. Raudonytė-Svirbutavičienė**, G. Klydžiūtė, A. Kareiva, A. Žarkov. The effect of annealing conditions on Ca/P ratio and phase transformations in bulk calcium phosphates. Open readings 2022: 65th international conference for students of physics and natural sciences, 15-18 March, Vilnius, Lithuania. Book of abstracts: 353.
6. R. Karalkevičienė, **E. Raudonytė-Svirbutavičienė**, A. Žarkov, A. Kareiva. Hydroxyapatite formation by solvothermal treatment of alpha-tricalcium phosphate with water-alcohol solution. Open readings 2022: 65th international conference for students of physics and natural sciences, 15-18 March, Vilnius, Lithuania. Book of abstracts: 215.
7. G. Klydžiūtė, **E. Raudonytė-Svirbutavičienė**, L. Lukavičiūtė, A. Beganskienė, A. Žarkov, A. Kareiva. Hydrothermal synthesis of hydroxyapatite from α-tcp using divalent cations as morphologycontrolling agents. Open readings 2022: 65th international conference for students of physics and natural sciences, 15-18 March, Vilnius, Lithuania. Book of abstracts: 370.
8. **E. Raudonytė-Svirbutavičienė**, A. Beganskienė, A. Žarkov, A. Kareiva. The effect of smaller and larger ions on the hydrothermal synthesis of doped hydroxyapatite. Junior Euromat 2022, 19-22 July, Coimbra, Portugal. Book of abstracts: 148.
9. **E. Raudonytė-Svirbutavičienė**, A. Žarkov, A. Kareiva. "Formation of oriented hydroxyapatite structures through the hydrolysis of ion-doped alpha-tricalcium phosphate". 23rd International Conference-School Advanced Materials and Technologies. Palanga, Lithuania, 23-27 August 2021, Book of abstracts: 195.
10. **E. Raudonytė-Svirbutavičienė**, A. Katelnikovas. "UV Light driven synthesis of plasmonic nanoparticles on ceria support: optimisation and potential applications in photocatalysis". *2nd international Conference Nanophotonics and Micro/Nano Optics*. Barcelona, Spain, 13 – 15 September 2017. Book of abstracts: 217-218. **Oral presentation.**

11. **E. Raudonytė-Svirbutavičienė**, C.W. Tai, A. Neagu, A. Katelnikovas. "Light driven synthesis of nanostructures". *Open Readings 2017. 60th International conference for students of physics and natural sciences.* Vilnius, Lithuania, 14-17 March 2017. Book of abstracts: 163.
12. **E. Raudonytė-Svirbutavičienė**, V. Vičkačkaitė, A. Žarkov, A. Katelnikovas. "Clean photochemical synthesis of semiconductor-silver nanocomposites and their photocatalytic performance for tributyltin degradation". *2nd International Conference on Green Chemistry and Sustainable Engineering*, Rome, Italy, 20-22 July 2016. Book of abstracts: 83-84. **Oral presentation.**
13. **E. Raudonytė-Svirbutavičienė**, A. Drabavičius, A. Katelnikovas. "Photochemical approach to the inorganic synthesis of PVP coated semiconductor nanoparticles". *Functional hybrid materials: structure elucidation from molecular to macroscopic level. A workshop/conference and training school.* Stockholm, Sweden, 25 – 27 May 2016. Book of abstracts: 37.
14. **E. Raudonytė-Svirbutavičienė**, A. Drabavičius, A. Katelnikovas. "Photochemical approach to the inorganic synthesis of semiconductor nanoparticles." *Chemistry and chemical technology. International conference of Lithuanian Society of Chemistry*. Vilnius, Lithuania, 28-29 April 2016. Book of abstracts: 144.
15. **E. Raudonytė-Svirbutavičienė**, T. Jüstel, A. Katelnikovas. "Photochemical synthesis of CeO_2 nanoparticles". *Nano-chemistry and nanomaterials*. 2nd *International Conference of Chemists* Vilnius, Lithuania, 22–25 October 2015. Book of abstracts: 45.

OTHERS

1. 2022: Comments on the pollution on the TV show "To save the Baltic Sea". Episodes 1-4. Info TV.
2. 2021: Young Scientist Award of the Lithuanian Academy of Sciences for the best research work of the year (2020).