FUNDING APPLICATION
Section C – CV Template

C.1 CURRICULUM VITAE

Personal information

Name, Surname:	Poienar Maria		
Date of birth:	26.08.1983	Sex:	F
Nationality:	Romanian		
Researcher unique identifier(s) (ORCID, Researcher ID etc.):	BrainMap ID: U-1700-036D-8010 https://orcid.org/0000-0002-0841-3286		
URL for personal website (if case):			

Education

Year	Faculty/department - University/institution - Country
2007-2010	Ph.D. in Chemistry, Specialisation: Chemistry of Materials (dissertation defended in 28.09.2010) - Universite de Caen Basse-Normandie, France *"Functional oxides based on chromium"*
2005- 2007	Master in Smart Nano-Microsystems - Faculty of Physics - West University of Timisoara, Romania *"Magneto-optical effects in magnetic fluids"*
2001-2005	Bachelor degree in Physics - Faculty of Physics - West University of Timisoara, Romania *"Opto-granulometry of magnetic liquids"*

Positions - current and previous
(*Academic sector/research institutes/industrial sector/public sector/other)*

Year	Job title – Employer - Country
01.02.2023-present	Scientific Researcher 2 - Institute for Advanced Environmental Research (ICAM), West University of Timisoara - Romania
01.01.2014-31.01.2023	Scientific Researcher 3 - National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara - Romania
03.01.2012-31.08.2012	Researcher, CNRS - Institute Charles Gerhardt, Montpellier - France
01.01.2011-31.12.2011	Postdoctoral Researcher, CNRS - Institute Charles Gerhardt, Montpellier - France
01.06.2011-31.12.2013	Scientific Researcher - National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara - Romania
01.02.2006-31.05.2011	Research Assistant - National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara- Romania

Career breaks (if case)

Year	Reason
yyyy-yyyy	

Project management experience

(*Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)*

Year	Project title - Role – Funder – Budget – link to project webpage
01.01.2013-31.12.2015	Project title: Influence of temperature and high pressure on the structural and physical properties in Fe-based Charge Order systems (PN-II-ID-JRP-2011-2) – Role: Principal Investigator/Project Manager – Funder: UEFISCDI – Budget 250 000 Euro
01.10.2015-01.10.2017	Project title: Improved multifunctional crednerite type oxides: from magnetism to catalysis **(**PN-II-RU-TE-2014-4) – Role: Principal Investigator//Project Manager – Funder: UEFISCDI – Budget 100 000 Euro

Other relevant professional experiences

(e.g. institutional responsibilities, organisation of scientific meetings, membership in academic societies, review boards, advisory boards, committees and major research or innovation collaborations, other commissions of trust in public or private sector)

Year	Description - Role
20.12.2023-present	Responsible for Radiological Protection (CNCAN licence level 1) in West University of Timisoara - X-Ray Laboratory
2007-present	Member in 7 National Research Projects (as Senior Researcher, Key Person).
2008-present	Member of professional associations: Romanian Society of Physics Romania, CRISTECH CNRS Technological Network France.
2018-2020	Member of the doctoral thesis guidance committee - PhD Student Silviu Brindusoiu
2023	Member of PhD thesis jury - PhD Student Andrei Racu
2023-present	Member of the doctoral thesis guidance committee - PhD Student Carla Schroning
2023-present	Member of the doctoral thesis guidance committee - PhD Student Irina Bodea
2015-present	Reviewer for Materials Letters, Solid State Sciences, Materials Chemistry and Physics, etc.
2015	Invited Associate Professor for 1 month at Universite de Caen Basse-Normandie, France.
2007-2023	Participation at training courses/schools in different interdisciplinary techniques: FAN du LLB, 2007, France; 2st ILL Annual School on Advanced Neutron Diffraction Data Treatment using the FullProf Suite, Grenoble, France, 2008; ANGD 2008 – Grands Instruments, Rennes, France, 2008, *Training course for performing experiments in large scale neutron and X-ray research facilities;* APPORTS DES SYMETRIES EN MATIERE CONDENSEE, France, 2009. *A thematic school on symmetries in Condensed Matter: group theory, phase transitions, crystallography, magnetism;* Summer School and workshop in Calorimetry 2015, Lyon, France; *Radiological protection in practices with sources of ionizing radiation*, Bucharest, Romania, 2023.

C.2 Track record of the last 10 years

A list of the ten most important scientific outputs (publications, patents, technologies etc).

1. **M. Poienar**, C. Martin, O.I. Lebedev, A. Maignan, "Advantage of low-temperature hydrothermal synthesis to grow stoichiometric crednerite crystals" Solid State Sci. 80 (2018) 39.
2. **M. Poienar**, R. Banica, P. Sfirloaga, C. Ianasi, C.V. Mihali, P. Vlazan, "Microwave-assisted hydrothermal synthesis and catalytic activity study of crednerite-type $CuMnO_2$ materials" Ceramics International 44 (2018) 6157-6161.
3. **M. Poienar**, P. Sfirloaga, C. Martin, D. Ursu, P. Vlazan, "Hydrothermal synthesis of crednerite $CuMn_{1-x}M_xO_2$ (M = Mg, Al; x = 0–0.08): structural characterisation and magnetic properties" Journal of Materials Science 53 (2018) 2389-2395.
4. **M. Poienar**, P. Sfirloaga, P. Vlazan, "Investigation of thermal and magnetic behaviour of mixed valence iron hydroxyphosphate from $Fe_3(PO_4)_2(OH)_2$ lipscombite systems" Ceramics International 45 (2019) 16540-16544.
5. **M. Poienar**, A. Lungu, P. Sfirloaga, M. Lungu, C. V. Mihali and P. Vlazan, "Use of ultrasound-assisted co-precipitation route to obtain $CuMnO_2$ semiconductor nanomaterials", Chemical Papers 73 (2019) 1541–1546.
6. **M. Poienar**, F. Damay, J. Rouquette, V. Ranieri, S. Malo, A. Maignan, E. Elkaim, J. Haines, C. Martin, "Structural and magnetic characterization of barbosalite $Fe_3(PO_4)_2(OH)_2$" Journal of Solid State Chemistry, 287 (2020) 121357.
7. B.-O. Taranu, M.-G. Ivanovici, P. Svera, P. Sfirloaga, **M. Poienar***, "$Ni_{11\square}(HPO_3)_8(OH)_6$ multifunctional materials: Electrodes for oxygen evolution reaction and potential visible-light active photocatalysts" Journal of Alloys and Compounds 848 (2020) 156595.
8. B.-O. Taranu, P. Vlazan, P. Svera (m. Ianasi), **M. Poienar**, P. Sfirloaga, "New functional hybrid materials based on clay minerals for enhanced electrocatalytic activity" Journal of Alloys and Compounds 892 (2022) 162239.
9. **M. Poienar**, B.-O. Taranu, P. Svera, P. Sfirloaga, P. Vlazan, "Disclosing the thermal behaviour, electrochemical and optical properties of synthetic $Fe_3(PO_4)_2(OH)_2$ materials" J. Therm. Anal. Calorim. 147 (2022) 11839–11855.
10. D.S. Merkulov, P. Vlazan, **M. Poienar**, S. Bognár, C. Ianasi, P. Sfirloaga, "Sustainable removal of 17a-ethynylestradiol from aqueous environment using rare earth doped lanthanum manganite nanomaterials" Catalysis Today 424 (2023) 113746.

C.3 Narrative CV

A narrative summarizing which work has had the greatest importance and impact.

My research career began in 2006 as Research Assistant in the National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara- Romania where my main activities were related to the study of the materials by atomic force (AFM) and scanning tunneling microscopy (STM). In September 2007, I became PhD Student at the Universite de Caen Basse-Normandie, France, working in CRISMAT Laboratory under the supervision of Dr Christine Martin. During the PhD thesis (2007-2010), my research interest was related to the strong lattice-spin-charge coupling in frustrated $CuMO_2$ systems with layered crystal structures and particularly to two of this type of compounds, i.e. delafossite $CuCrO_2$ (space group R-3m) and crednerite $CuMnO_2$ (space group C2/m). The obtained results provided the opportunity to explore the relationships between the spin order and the spontaneous electric polarisation in these multiferroic materials [M. Poienar et al. *Phys. Rev. B* 79, 014412 (2009) - Highly cited paper :121 citations, M. Poienar et al. *Phys. Rev. B* 81, 104411 (2010)- Highly cited paper: 88 citations, F. Damay, M. Poienar et al., *Phys. Rev. B* 80, 094410 (2009)].

After completing my PhD, in 2011 I become postdoctoral researcher at Institute Charles Gerhardt Montpellier, France where my work aimed at study the triangular mixed valence system $LuFe_2O_4$, characterized

by charge-spin frustration and which exhibits electronic driven ferroelectricity below 330K. For $LuFe_2O_{4+x}$ system, we demonstrated the oxygen storage ability up to x=0.5 and its cycling possibility, the unusual increase of the cell volume, induced by the storage of 0.5 O per $LuFe_2O_4$, corresponding to an OSC (1426 μmol-O/g) comparable with those of some commercial three-way catalysts [M. Hervieu, (..) M. Poienar, C. Martin, *Nature Materials* 13, 74 (2014)]. Other part of my work, in 2012 for 8 months, as CNRS postdoctoral researcher in a collaboration between Institute Charles Gerhardt and ADEME Valmiante 2 aimed to investigate the asbestos materials in view of the neutralization of the dangers inherent in asbestos waste, and prospects for recovery.

Upon returning to Romania, in the 2013-2015 period, at National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara, I won by competition as a Principal Investigator, the Project entitled *Influence of temperature and high pressure on the structural and physical properties in Fe-based Charge Order systems*, a collaboration protocol between the research financing bodies from France (ANR) and Romania (UEFISCDI), project dedicated to the study of charge order phenomena and the establishment of structures-properties relationships in mixed valence iron oxides in an extended temperature and pressure range.

In 2015, I won as Principal Investigator a Young Research Team project (2015-2017) entitled *Improved multifunctional crednerite type oxides: from magnetism to catalysis* where the main scientific achievements were *(i)* new reliable synthesis methods: classic but also unconventional to obtaining single-phase $CuMnO_2$ compounds by hydrothermal method at low temperature and low pressure [M. Poienar et al., *Solid State Sci.* 80, 39 (2018)], microwave assisted hydrothermal method [M. Poienar et al., *Ceramics International* 44, 6157 (2018)] and ultrasound assisted co-precipitation method [M. Poienar et al. *Chemical Papers* 73, 1541–1546 (2019)]; *(ii)* a precise description of our samples by the use of combined complementary experimental techniques in an extended temperature range and at different scales to carefully investigate the crystal structures and microstructures, the electric behaviours and the magnetic ordering processes; *(iii)* the study of structures-properties relationships and understanding of underlying mechanisms that govern the properties and (*iv*) identification of new applications for $CuMnO_2$ as photocatalysts due to their good performance for the H_2-photo evolution [M. Poienar et al., *Ceramics International* 44, 6157 (2018)].

My research activities as Scientific Researcher 3 in National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara (2016-2023) concerned also the synthesis and characterisation of other transition metal oxide materials as for example in the case of phosphite $Ni_{11}\square(HPO_3)_8(OH)_6$ materials obtained by high pressure-high temperature hydrothermal synthesis I lead the investigation of their catalytic behaviour and positive results were obtained for their photocatalytic activity in removal of RhB and MB from water under visible light irradiation [B.O. Taranu, (..), M. Poienar*, *Journal of Alloys and Compounds* 848, 156595 (2020)]. During this period, as team member in National research projects, I was involved in the study of perovskites -type materials ($LaMnO_3$, $NaNbO_3$, $KNbO_3$) and marine shells.

From February 2023, I occupied the position of Scientific Researcher 2 at Institute for Advanced Environmental Research (ICAM), West University of Timisoara - Romania where the main scientific interest is devoted to the synthesis and characterization of materials with applications in different domains as environmental protection, sustainable materials for energy, optics etc. My main focus is to use experimental laboratory characterization techniques for the structural, thermal, magnetic and electric properties of different materials and by performing experiments in large-scale facilities (neutrons and X-Ray synchrotron diffraction). I have established numerous scientific collaborations on various research areas with researchers from Romania and abroad: „Stefan cel Mare" University (Romania), „Coriolan Dragulescu" Institute of Chemistry Timisoara (Romania), Institute Charles Gerhardt (France), Crismat Laboratory (France), Jan Długosz University (Poland), ISIS Rutherford Facility (UK).

Aside from my research interest, I am also Associate Teacher at Physics Faculty - West University of Timisoara and my teaching activities on the X-Ray diffraction techniques and Rietveld method for crystal structure analysis are dedicated to the students from the Master programs. I am actively engaged in promoting scientific research to the students, presentations at West University of Timisoara in Spring Physics Camp or

„Innovation & Entrepreneurship in the European Blue Economy" Erasmus+ Blended Intensive Learning Programme for example. As administrative responsibility, I am Responsible for Radiological Protection (CNCAN licence level 1) in West University of Timisoara - X-Ray Laboratory. Other relevant information: 53 ISI articles (16 as main author), 2 meeting abstracts, h index is 14 (WOS), 15 (Scopus), co-autor of 2 National Patents and more than 50 participations at National and International conferences.

Note: For each nominated person, please present the CV (uploaded as a single document of maximum 6 pages, saved with the name of the member, A4 format, Times New Roman font, 11-point font size, 1.15 line spacing and 2 cm margins).