

PERSONAL INFORMATION



Crina SOCACI (former Cismas)

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 csocaci@itim-cj.ro

WORK EXPERIENCE

01/05/2013–Present

Senior researcher (CS II)

INCDTIM Cluj-Napoca, Cluj-Napoca (Romania)

Synthesis and characterization of graphene-based nanomaterials with potential applications in sensors (chemical and electrochemical) and photocatalysis.

Synthesis and characterization of hybrid materials like core-shell functionalized magnetic nanoparticles based on magnetite and organic compounds with possible applications in medicine and catalysis (January 2011-January 2014).

Writing project proposals

Writing scientific papers

01/01/2011–01/05/2013

Junior researcher (CS III)

INCDTIM Cluj-Napoca, Cluj-Napoca (Romania)

Synthesis and characterization of hybrid materials like core-shell functionalized magnetic nanoparticles based on magnetite and organic compounds with possible applications in medicine and catalysis.

01/10/2008–Present

Junior researcher (CS III)

Babes-Bolyai University, Cluj-Napoca (Romania)

Project leader (2009-2011), Research in the field of organic supramolecular chemistry, hydrogen-bonding interactions, organic synthesis, HPLC/MS; carbon dots (2012-2016).

16/10/2006–01/10/2008

Postdoctoral researcher

Babes-Bolyai University, Cluj-Napoca (Romania)

Research in the field of organic supramolecular chemistry, cryptands by acetylenic homocoupling (Supervisor: Prof. Dr. Ion Grosu).

01/01/2005–01/07/2006

Marie Curie postdoctoral researcher

National and Kapodistrian University of Athens, Athens (Greece)

Research in the field of nucleobases oxidation (mainly guanine), HPLC for the identification and isolation of oxidation products of glucopyranosylguanine (Supervisor: Dr. Thanasis Gimisis).

EDUCATION AND TRAINING

15/11/1999–15/11/2004

PhD in Chemistry

Babes-Bolyai University, Cluj-Napoca (Romania)

Stereochemistry and conformational analysis, nucleoside derivatization

01/10/1999–01/07/2000

Master of science

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca (Romania)

Heterocyclic chemistry

01/10/1995–01/07/1999

Bachelor

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca (Romania)

Chemistry

PERSONAL SKILLS

Mother tongue(s) romanian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
english	C2	C2	C2	C2	C2
german	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

I have the ability to carry out independent research work, to teach and supervise research work carried out by undergraduate students, also to work in a team. I am also able to have positive interactions both regarding technical competencies and human relationships with most of my colleagues.

Organisational / managerial skills

Principal investigator:

Grant PNII-RU-TE-2014-4-0305 (Oct. 2015-Sep. 2017) Graphene-porphyrin supramolecular assemblies for chemical and electrochemical detection of hydrogen peroxide-an oxidative stress marker

Grant PN II ID_2358 (Jan. 2009-Dec. 2011) Design, formation and properties of new supramolecular assemblies by hydrogen bonding of nucleotide bases

Job-related skills

NMR, HPLC/MS (ionic trap, Agilent) – Training on „Development of LC-MS/MS (IT) methods by optimization of trap and ESI source parameters" (july 2009), advanced organic synthesis (including nucleoside derivatization), UV-irradiation and gamma-radiolysis followed by products identification of modified nucleosides, etc

A very good ability to perform literature searches.

Publications: 44 papers, h=12, citations (without self-citations)=333

Member of: Romanian Chemists Association

Referee for: J. Org. Chem., Eur. Polym. J., Carbon, Coll. Surf. B

Digital skills

Microsoft Office, ChemOffice, Software for data analysis: MestreC, MestreNova, Diamond, Mercury, Origin

Driving licence

A, B

ADDITIONAL INFORMATION

The "Nicolae Teclu" prize (collectively) of the Romanian Academy for 2016 - for *Graphene derivatives with catalytic and electrocatalytic properties*

May 2008: invited researcher at Texas University at Austin (Prof. Johnatan Sessler)

June 2006: secondment research stage at CNRS Bologna, Italy (Prof. C. Chatgililoglu)
 2002-2003: DAAD fellowship at Humboldt University of Berlin(Prof. Juergen Liebscher), Germany
 June 2002: CEEPUS scholarship at Charles University of Prague, Czech Republic
 June 2001-July 2001: 2 months World Bank fellowship at Humboldt University of Berlin(Prof. Juergen Liebscher), Germany
 April 2000 – June 2000 – Socrates scholarship at Fachhochschule Merseburg, Germany (Prof. H. Zwanziger)
 April 1998 – August 1998 fellowship at Fachhochschule Merseburg, Germany, financed by the Ministry of Culture Sachsen-Anhalt and Fachhochschule Merseburg.

Publicații Selected graphene publications:

1. L. Magerusan, F Pogacean, M. Coros, C. Socaci, S. Pruneanu, C Leostean, I.O. Pana, Green methodology for the preparation of chitosan/graphene nanomaterial through electrochemical exfoliation and its applicability in Sunset Yellow detection, *Electrochimica Acta* 2018, **283**, 578-589.
2. M. Coros, F. Pogacean, L. Magerusan, M.C. Rosu, A.S. Porav, C. Socaci, A. Bende, R.I. Stefan-van Staden, S. Pruneanu, Graphene-porphyrin composite synthesis through graphite exfoliation: The electrochemical sensing of catechol, *Sens. Actuat. B: Chemical* 2018, **256**, 665-673.
3. M.C. Rosu, M. Coros, F. Pogacean, L. Magerusan, C. Socaci, A. Turza, A.; Pruneanu, S. Azo dyes degradation using TiO₂-Pt/graphene oxide and TiO₂-Pt/reduced graphene oxide photocatalysts under UV and natural sunlight irradiation, *Solid State Sciences* 2017, **70**, 13-20.
4. D. Toloman, A. Popa, M. Stan, C. Socaci, A.R. Biris, G. Katona, F. Tudorache, I. Petrila, F. Iacomi, Reduced graphene oxide decorated with Fe doped SnO₂ nanoparticles for humidity sensor, *Applied Surface Science* 2017, **402**, 410-417.
5. M.C. Rosu, E. Pall, C. Socaci, L. Magerusan, F. Pogacean, M. Coros, A. Turza, S. Pruneanu, Cytotoxicity of methylcellulose-based films containing graphenes and curcumin on human lung fibroblasts, *Process Biochemistry* 2017, **52**, 243-249.
6. M.C. Rosu, M. Coros, F. Pogacean, L. Magerusan, C. Socaci, A. Turza, S. Pruneanu, Electrochemical platform based on nitrogen-doped graphene/chitosan nanocomposite for selective Pb²⁺ detection *Nanotechnology* **2017**, **28**, 114001.L.
7. F. Pogacean, A.R. Biris, C. Socaci, M. Coros, L. Magerusan, M.C. Rosu, M.D. Lazar, G. Borodi, S. Pruneanu, Graphene-bimetallic nanoparticle composites with enhanced electro-catalytic detection of bisphenol A, *Nanotechnology* **2016**, **48**, 484001.
8. L. Magerusan, F. Pogacean, C. Socaci*; M. Coros, M.C. Rosu, S. Pruneanu* Charge transfer-resistance in nitrogen-doped/undoped graphene: Its influence on the electro-catalytic reduction of H₂O₂, *Electrochimica Acta* **2016**, **220**, 664-671.
9. M.C. Roșu, C. Socaci, V. Floare-Avram, G. Borodi, F. Pogăcean, M. Coroș, L. Magerușan, Photocatalytic performance of graphene/TiO₂-Ag composites on amaranth dye degradation, *Mat. Chem. Phys.* 2016, **179**, 233-241.
10. L. Magerusan, C. Socaci*, F. Pogacean, M.C. Rosu, A.R. Biris, M. coros, A. Turza, V. Floare-Avram, G. Katona, S. Pruneanu*, Enhancement of peroxidase-like activity of N-doped graphene assembled with iron-tetrapyrridylporphyrin, *RSC Advances* 2016, **83**, 79497-79506.
11. M. Coroș, F. Pogăcean, M.-C. Roșu, C. Socaci, G. Borodi, L. Magerușan, A. R. Biriș, S. Pruneanu, Simple and cost-effective synthesis of graphene by electrochemical exfoliation of graphite rods *RSC Advances* 2016, **6**, 2651-2661.
12. C. Socaci, F. Pogăcean, A. R. Biriș, M. Coroș, M.-C. Roșu, L. Magerușan, G. Katona, S. Pruneanu, Graphene oxide vs. reduced graphene oxide as carbon support in porphyrin peroxidase biomimetic nanomaterials, *Talanta* 2016, **148**, 511-517.
13. D. Olteanu, A. Filip, C. Socaci, A. R. Biris, X. Filip, M. Coros, M. C. Rosu, F. Pogacean, C. Alb, I. Baldea, P. I Bolfa, S. Pruneanu, Cytotoxicity assessment of graphene-based nanomaterials on human dental follicle stem cells, *Coll. Surfaces B* 2015, **136**, 791-798
14. R.I. Stefan-van Staden, L. A. Gugoasa, C. Socaci, A. R. Biris, New nanocomposite-graphene pastes based stochastic microsensors, *RSC Advances* 2015, **5**, 66185-66191
15. F. Pogacean, C. Socaci*, S. Pruneanu*, A.R. Biris, M. Coros, L. Magerusan, G. Katona, R. Turcu, G. Borodi, Graphene based nanomaterials as chemical sensors for hydrogen peroxide - a comparison study of their intrinsic peroxidase catalytic behavior, *Sens. Actuat. B: Chemical* 2015, **213**, 474-483.

16. S. Pruneanu, A. R. Biriş, F. Pogăcean, C. Socaci, M. Coroş, M. Roşu, F. Watanabe, A. S. Biriş, The influence of uric and ascorbic acid on the electrochemical detection of dopamine using graphene-modified electrodes, *Electrochimica Acta* 2015, *154*, 197-204.