

## PAPERS

Dr. Maria Viorica Ștefan

### a) Books

**Book Title :** *Thin Films of Metal Chalcogenide –Preparation, properties , applications,*  
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### b) Papers

#### 1) ISI Papers

1. Spectroscopic characterisation of chemical bath deposited cadmium sulphide layers, R. Grecu, E. J. Popovici, **M. Lădar**, L. Pascu, E. Indrea, *J. Optoelectron. Adv. Mat.*6(1) (2004) 127-132. (IF-1.003)
2. Studies on chemical bath deposited zinc sulphide thin films with special optical properties, **M. Lădar**, E.-J. Popovici, I. Bâldea, R. Grecu, E. Indrea, *J. Alloy Comp.*, 434-435 (2007) 697-700 (IF-1.455)
3. Growth and characterisation of zinc sulphide thin films deposited on ITO coated glass, **M. Ștefan**, E.-J. Popovici, I. Bâldea, A. Mesaros, L. Muresan , R. Grecu, *Stud. Univ. Babes-Bolyai, Chemia* 2, LI (2006) 147-152. (IF-0.231)
4. Studies on the Influence of Flux Nature on the Properties of Niobium Activated Yttrium Tantalate Phosphor, A. Mesaroș, E.-J. Popovici, L. Mureșan, **M. Ștefan**, R. Grecu, M. Vasilescu, *Stud. Univ. Babes-Bolyai, Chemia* 2, LI (2006) 135-140. (IF-0.231)
5. Spectral Investigations of Europium Activated Yttrium Oxide Phosphor Prepared by Coprecipitation Method with Oxalic Acid, L. Mureșan, E. J. Popovici, A. Mesaroș, **M. Ștefan**, E. Indrea, *Stud. Univ.s Babes-Bolyai, Chemia* 2, LI, (2006)141-146. (IF-0.231)
6. Preparation and characterization of TiO<sub>2</sub> thin films with special optical properties, **M. Ștefan**, E.J. Popovici, L. Mureșan, R. Grecu, E. Indrea, *J. Optoelectron. Adv. Mat.*,10(9) (2008) 2228-2233.(IF-0.577)
7. Ultrasound-assisted synthesis of highly disperse zinc sulphide powders A. R. Tomșa, E. J. Popovici, A. I. Cadiș, **M. Ștefan**, L. Barbu-Tudoran, S. Aștilean, *J. Optoelectron. Adv. Mat.*, 10(9) (2008) 2342-2345. (IF-0.577)
8. Spectral investigations on rare earth activated yttrium niobium/tantalate phosphors, E.J. Popovici, F. Imre-Lucaci, L. Muresan, **M. Ștefan**, E. Bica, R. Grecu, E. Indrea, *J. Optoelectron. Adv. Mat.*, 10(9) (2008) 2334-2337. (IF-0.577)
9. Morpho-structural and luminescent investigations of niobium activated yttrium tantalate powders, A. Hristea, E. J. Popovici, L. Mureșan, **M. Ștefan**, R. Grecu, A. Johansson, M. Boman, *J. Alloys Comp.*, 471(2009) 524-529.(IF-2.135)
10. The influence of the preparative conditions on optical and morpho-structural properties of zinc sulphide thin films, **M. Ștefan**, E.J. Popovici, I. Bâldea, R. Grecu, E. Indrea, *Rev. Chim.(București)*, 60(4) (2009) 342-346.(IF-0.552)
11. Growth and characterisation of zinc-cadmium sulphide thin films with special optical properties, **M. Ștefan**, E.J. Popovici, I. Bâldea, R. Grecu, E. Indrea, *Stud. Univ. Babes-Bolyai-Chemia*, 54(3)(2009) 203-211.(IF-0.086)
12. Studies on the Synthesis of Cerium Activated Yttrium Aluminate Phosphor by wet-chemical route, E. J. Popovici, **M. Ștefan**, F. Imre-Lucaci, L. Muresan, E. Bica, E Indrea, L. Barbu-Tudoran, *Physics Proceedia* 2 (2009) 603-616.

13. Synthesis Of Tungsten Trioxide Mesoporous Powders Prepared By Inorganic Sol-Gel Route, E. Bica, E.J. Popovici, M. Ștefan, I. Perhaița, I. C. Popescu, *Stud. Univ. Babeș-Bolyai-Chemia*, XLV(2) (2010) 169-177(IF-0.231)
14. Growth and characterisation of chemical bath deposited zinc sulphide thin films, **M. Ștefan**, E.J. Popovici, R. Grecu, E. Indrea, *J. Optoelectron. Adv. Mat.*,13(11-12) (2011) 1489-1493. (IF-0.457)
15. Morphological, structural and optical characterisation of tungsten trioxide films prepared by sol-gel route:effect of substrate and annealing temperature, E. Bica, E. J. Popovici, **M. Ștefan**, I. Perhaiță, L. Barbu-Tudoran, E. Indrea, I. C. Popescu, *Dig. J. Nanomater. Biostr.* 6(4) (2011) 1935-1946. (IF-1.2)
16. Structural characterisation of zinc sulphide thin films by X-ray scattering, **M. Ștefan**, E. Indrea, E. J.Popovici, M.L. Soran, O. Pană, *AIP Conf. Proc.*1425, (2012)155-158.
17. Magnetization enhancement of magnetic nanoparticles coated with polypyrrole, O. Pana, C.Leostean, M.L.Soran, **M.Ștefan**, S. Macavei, N.G. Gheorghe, C. M. Teodorescu, *AIP Conf. Proc.*1425 (2012)135-138.
18. Synthesis of luminescent zinc sulphide thin films by chemical bath deposition, **M. Ștefan**, E.J. Popovici, O. Pana, E. Indrea, *J. Alloy Comp.* 548 (2013) 166-172. (IF-2.726)
19. Properties of Eu doped TiO<sub>2</sub> nanoparticles by using organic additives, C. Leostean, **M. Ștefan**, O. Pana, R. C. Suci, T.D. Silipas, A. Cadis, E. Gautron, *J. Alloy Comp.* 575 (2013) 29-39. (IF-2.726).
20. Synthesis and characterisation of Fe-Pt based multi-shell magnetic nanoparticles, O. Pana, C. Leostean, M. L. Soran, **M. Ștefan**, S. Macavei, S. Gutoiu, V. Pop, O. Chauvet, *J. Alloy Comp.* 574(2013) 477-485. (IF-2.726).
21. **M. Ștefan**, O. Pana, O. Onija, C. Leostean, M. L. Soran, M.C Rosu, S. Gutoiu, Synthesis and Spectral Characterization of Eu Doped TiO<sub>2</sub> Nanoparticles, *AIP Conf. Proc.* 156 (2013),259-262.
22. Synthesis and characterisation of Fe<sub>3</sub>O<sub>4</sub>@ZnS and Fe<sub>3</sub>O<sub>4</sub>@Au@ZnS core-shell nanoparticles, **M. Ștefan**, C. Leostean, O. Pana, M. L. Soran, R. C. Suci, E. Gautron, O. Chauvet, *Appl. Surf. Sci.* 288 (2014) 180-192.(IF-2.538)
23. Synthesis and characterisation of Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub> core-shell nanoparticles, **M. Ștefan**, O. Pana, C. Leostean, C. Bele, D. Silipas, M. Senila, E. Gautron, *J. Appl. Phys.*, 116 (2014) 114312(1-11).(IF-2.185)
24. Interface charge transfer in ZnO:Mn@ZnS nanocomposites, **M. Ștefan**, D. Toloman, A. Popa, A. Mesaros, O. R. Vasile, C. Leostean, O. Pana, *J. Nanopart.Res.* 18(59) (2016)1-14.(I.F.-2.101)
25. Magnetic recoverable Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub>:Eu composite nanoparticles with enhanced photocatalytic activity, **M. Ștefan**, C. Leostean, O. Pana, D. Toloman, A. Popa, I. Perhaita, M. Senilă, O. Marinceș, L. Barbu-Tudoran, *Appl. Surf. Sci.* 390, 2016,248-259.(IF-3.150)
26. New PLA/ZnO:Cu/Ag bionanocomposites for food packaging, C. Vasile, M. Râpă, **M. Ștefan**, M. Stan, S. Macavei, R. N. Darie-Niță, L. Barbu-Tudoran, D. C. Vodnar, E. E. Popa, R. Ștefan, G. Borodi, M. Brebu, *eXPRES Polym. Lett.* 11(7), (2017) 531–544.
27. Removal of antibiotics from aqueous solutions bygreen synthesized magnetite nanoparticles withselected agro-waste extracts, M. Stan, I. Lung, M.-L. Soran, C. Leostean, A. Popa, **M. Ștefan**, M.D.Lazar, O. Opris, T.-D. Silipas, A. S. Porav,

- Proc. Safety Environ. Protection*, 107 (2017) 357–372.
28. Impact of Gd ions from the lattice of TiO<sub>2</sub> nanoparticles on the formation of reactive oxygen species during the degradation of RhB under visible light irradiation, D. Toloman, A. Popa, **M. Stefan**, O. Pana, T. D. Silipas, S. Macavei, L. Barbu-Tudoran, *Mater. Sci. Semicond. Process.* 71(2017) 61-68.
  29. Characterization of Cu<sub>2</sub>ZnSnS<sub>4</sub> Thin Film Deposited by Pulse Laser Deposition, S. Macavei, D. Toloman, **M. Stefan**, A. Popa, L. Barbu-Tudoran, L. Grosan, R. Suci, O. Pana, R. Balan, AIP Conference Proceeding 1917(2017) UNSP 040010
  30. Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub>: Gd nanoparticles with enhanced photocatalytic activity and magnetic recyclability, A. Popa, **M. Stefan**, D. Toloman, O. Pană, A. Mesaroş, C. Leostean, S. Macavei, O. Marincas, R. Suci, L. Barbu-Tudoran, *Powd. Technol.* 325 (2018) 44-451.
  31. New properties of Fe<sub>3</sub>O<sub>4</sub>@SnO<sub>2</sub> core shell nanoparticles following interface charge/spin transfer, C. Leostean, O. Pana, **M. Stefan**, A. Popa, D. Toloman, M. Senilă, S. Gutoiu, S. Macavei, *Appl. Surf. Sci.* 427(2018)192-201.
  32. Efficient photocatalytic removal of RhB using magnetic Fe<sub>3</sub>O<sub>4</sub>-SnO<sub>2</sub> nanocomposites containing Sn<sup>2+</sup> interstitial impurities, **M. Stefan**, A. Popa, O. Pană, C. Leostean, D. Toloman, D. Lazar, F. Pogăcean, S. Macavei, S. Gutoiu, *J. Mat. Sci.: Mater. Electron.* 29 (2018)14132–14143.
  33. Removal of Lead(II), Cadmium(II), and Arsenic(III) from Aqueous Solution Using Magnetite Nanoparticles Prepared by Green Synthesis with Box-Behnken Design, I. Lung, M. Stan, O. Opris, M. L. Soran, M. Senila, **M. Stefan**, *Anal. Lett.* 51(16) (2018) 2519-2531.
  34. Green synthesized Fe<sub>3</sub>O<sub>4</sub> nanoparticles for Lanasy Red azo dye removal from aqueous solutions, I. Lung, M.-L. Soran, M. Stan, O. Opris, F. Copaciu, M. **Stefan**, M.D. Lazăr, C. Leostean, A.S. Porav, *Rev. Roum. Chim.* 63 (10) (2018) 965-970.
  35. D. Toloman, O. Pana, **M. Stefan**, A. Popa, C. Leostean, S. Macavei, D. Silipas, I. Perhaită, M. D. Lazar, L. Barbu-Tudoran, Photocatalytic activity of SnO<sub>2</sub>-TiO<sub>2</sub> composite nanoparticles modified with PVP, *J. Colloid Interface Sci.* 542 (2019) 296–307.

## 2) Non ISI papers

1. Studies on some tungsten trioxide powders, **M. Stefan**, E. Bica, L. Mureşan, I. Perhaită, E. Indrea, E. J. Popovici, *J. Optoelectron. Adv. Mat.-Simposia*, 1(6), 2009, 1004-1007.
2. Characterisation of some tungsten trioxide thin films obtained by dip-coating, E. Bica, **M. Stefan**, L. Mureşan, E. Indrea, I.C. Popescu, E.J. Popovici, *J. Optoelectron. Adv. Mat.-Simposia*, 1(6), 2009, 1011-1014.
3. Synthesis and Characterisation of Tungsten Trioxide Powders Prepared by Sol-Gel Route, **M. Stefan**, E. Bica, L. Mureşan, R. Grecu, E. Indrea, M. Trif, E.J. Popovici, *J. Optoelectron. Adv. Mat.-Simposia*, 2(1), 2010, 115-118.
4. Nanostructured Tungsten Trioxide Thin Films, E. Bica, **M. Stefan**, I. C. Popescu, L. Mureşan, M. Trif, E. Indrea, E.-J Popovici., *J. Optoelectron. Adv. Mat.-Simposia* 2(1), 2010, 107-110.
5. Spectral investigations of cerium activated yttrium silicate blue emitting phosphor, L. Muresan, **M. Stefan**, E. Bica, M. Morar, E. Indrea, E. J. Popovici, *J. Optoelectron. Adv. Mat.-Simposia*, 2(1), 2010, 131-135.

- **Reviste Univ. București, Cluj, Iasi, Craiova, Timișoara, Oradea**

1. Spectroscopic characterisation of cadmium sulphide thin layers on ITO coated glass, **M. Lădar**, E.-J. Popovici, L. Pascu, R. Grecu, I. C. Popescu and E. Indrea, *Studia Universitatis Babeș-Bolyai Cluj-Napoca, Physica, Special issue 2*, XLVIII, 2003, 469-471.
2. Investigation of optical properties of chemical bath deposited zinc sulphide thin films, R. Grecu, E.J. Popovici, **M. Lădar**, L. Silaghi-Dumitrescu, E. Indrea, *Stud. Univ. Babeș-Bolyai, Physica, Special issue 2*, XLVIII, 2003, 472-475.
3. Spectral characterization of zinc sulphide thin films with luminescent properties, **M. Lădar**, E.-J Popovici, I. Baldea, R. Grecu, E. Indrea, *Stud. Univ. Babeș-Bolyai, Physica, XLIX, 3*, 2004, 157-161.
4. Spectral Characterisation of Anthocyanin Extracts for Dye Sensitised Photovoltaic Cells, E. J. Popovici, N. Popovici, **M. Lădar**, R. Grecu, *Stud. Univ. Babeș-Bolyai, Physica, L, 4b*, 2005, 646-649.
5. Synthesis and Characterisation of Sodium Sensitive Ionophore Based on p-Alkylcalix[n] Arene, E. J. Popovici, N. Popovici, **M. Lădar**, R. Grecu, *Stud. Univ. Babeș-Bolyai, Physica, L, 4b*, 2005, 650-653.

### c) Patents

1. Preparation procedure of zinc sulphide thin films with luminescent properties E.J. Popovici, **M. Lădar**, R. Pușcaș, I.C. Popescu, E. Indrea, **Patent** RO 122546 B1/28.08.2009
2. Automatic installation for advanced purification of drinking water with magnetic nanoparticles and cold plasma, C. Tudoran, **M. Stefan**, N. Toșa, O. Pană, S. Macavei, A. Bot , CBI A-00840/16.11.2016.

### d) Coordinated projects

Grants and projects won by competition:

1. Metal chalcogenide thin films with special properties - **Grant CNCSIS Td 52/2005**; 2005-2007;
2. Composite nanoparticles with core-shell structure based on magnetite and semiconductors with predetermined **(PN2-RU-PD54/2011)**; 2011-2013;

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