

Book chapters

4. L. Buimaga–Iarinca, D. Marconi, A. Colniță, C. Morari, **I. Turcu**, *Molecular Devices: From Rational Design to Functional Units*, **Nanotechnologies and Nanomaterials for Various Applications**, Eds. Maria Zaharescu, Marius Enăchescu, Dan Dascălu, Editura Academiei Române, București ISBN 978-973-27-2954-8 (2018) 26 – 42.
3. A. Colniță, D. Marconi, **I. Turcu**, *A Review - Application of Molecular Beam Epitaxy*, **Biophysics for Biomedical and Environmental Sciences**, Ed. Monica Florescu, **Transilvania University Press**, ISBN 978-606-19-0768-7 (2016) 141 – 148.
2. D. Marconi, A. Colniță, **I. Turcu**, *A Hybrid Top-Down, Bottom-Up Approach to Fabrication of High Quality Interdigitated Electrodes*, **Biophysics for Biomedical and Environmental Sciences**, Ed. Monica Florescu, **Transilvania University Press**, ISBN 978-606-19-0768-7 (2016) 149 – 160.
1. **I. Turcu**, *Quasi-ballistic Light Scattering on Particulate Media*, in **Progress in Optics Research**, ed. Maximilian N. Schulz, **Nova Science Publishers, Inc. New York**, ISBN: 978-1-60456-110-4 (April 15, 2009) 103 – 128.

Published papers (selection)

43. Nicoleta Elena Dina & **Ioan Turcu**, *Processes in Isotopes and Molecules (PIM 2017)*, 27–29 September 2017, Cluj-napoca, Romania, Anal. Lett. (2018) DOI: [10.1080/00032719.2018.1473415](https://doi.org/10.1080/00032719.2018.1473415).
42. Alia Colniță, Daniel Marconi, Radu Tiberiu Brățfălean, **Ioan Turcu**, *Single-step fabrication of homoepitaxial silicon nanocones by molecular beam epitaxy*, **Appl. Surf. Sci.** **436** (2018) 1163–1172, doi: [10.1016/j.apsusc.2017.12.136](https://doi.org/10.1016/j.apsusc.2017.12.136).
41. Nicoleta Elena Dina and **Ioan Turcu**, *Preface: Processes in Isotopes and Molecules (PIM 2017)*, **AIP Conf. Proc.** **1917**, 010001 (2017); doi: [10.1063/1.5018271](https://doi.org/10.1063/1.5018271).
40. M. Bacalum, L. Janosi, F. Zorila, A.-M. Tepes, C. Ionescu, E. Bogdan, N. Hadade, L. Craciun, I. Grosu, **I. Turcu***, Mihai Radu*, *Modulating short tryptophan- and arginine-rich peptides activity by substitution with histidine*, **Biochim. Biophys. Acta (BBA) - General Subjects** 1861 (2017) 1844-1854. doi: [10.1016/j.bbagen.2017.03.024](https://doi.org/10.1016/j.bbagen.2017.03.024)
39. F. Martin, D. Marconi, S. Neamțu, T. Radu, M. Florescu, R. Turcu, C. Lar, N.D. Hădade, I. Grosu, and **I. Turcu**, *“Click” access to multilayer functionalized Au surface: A terpyridine patterning example*, **Mater. Sci. Eng. C Mater. Biol. Appl.** **75** (2017) 1343-1350. doi: [10.1016/j.msec.2017.03.033](https://doi.org/10.1016/j.msec.2017.03.033)

38. Alia Colniță, Daniel Marconi, **Ioan Turcu**, *Fabrication of Interdigitated Electrodes Using Molecular Beam Epitaxy and Optical Lithography*, **Anal. Lett.** **49** (3) (2016) 378-386. doi: [10.1155/2014/514508](https://doi.org/10.1155/2014/514508)
37. Daniel Marconi, Alia Colniță, **Ioan Turcu**, *The Influence of Deposition Rate on the Structure and Morphology of Gold/Silicon(111) Growth by Molecular Beam Epitaxy*, **Anal. Lett.** **49** (3) (2016) 400-410 doi: [10.1080/00032719.2015.1022823](https://doi.org/10.1080/00032719.2015.1022823)
36. Alexandra Fălămaș and **Ioan Turcu**, *Preface: Processes in Isotopes and Molecules (PIM 2015)*, **AIP Conf. Proc.** **1700**, 010001 (2015); doi: [10.1063/1.4938432](https://doi.org/10.1063/1.4938432)
35. A. Calborean, F. Martin, D. Marconi, R. Turcu, I.E. Kacso, L. Buimaga-Iarinca, F. Graur and **I. Turcu**, *Adsorption mechanisms of L-Glutathione on Au and controlled nano-patterning through Dip Pen Nanolithography* **Mater. Sci. Eng. C Mater. Biol. Appl.** **57** (2015) 171-180 doi: [10.1016/j.msec.2015.07.042](https://doi.org/10.1016/j.msec.2015.07.042)
34. A. Pîrnău, M. Mic, M. Bogdan, **I. Turcu**, *Characterization of β -cyclodextrin inclusion complex with procaine hydrochloride by 1H NMR and ITC* **J. Incl Phenom. Macrocycl. Chem.** **79** (3-4) (2014) 283-289 doi: [10.1007/s10847-013-0350-x](https://doi.org/10.1007/s10847-013-0350-x)
33. Luiza Buimaga-Iarinca, Calin G. Floare, Adrian Calborean and **Ioan Turcu** *DFT study on cysteine adsorption mechanism on Au(111) and Au(110)* **AIP Conf. Proc.** **1565** (2013) 29-33 doi: [10.1063/1.4833690](https://doi.org/10.1063/1.4833690)
32. Mihaela Mic, Adrian Pirnău, Mircea Bogdan and **Ioan Turcu** *Inclusion complex of benzocaine and β -cyclodextrin: NMR and isothermal titration calorimetry studies* **AIP Conf. Proc.** **1565** (2013) 63-66 doi: [10.1063/1.4833697](https://doi.org/10.1063/1.4833697)
31. **Ioan Turcu** and Mihaela Mic, *Size dependence of molecular self-assembling in stacked aggregates. 2. Heat exchange effects*, **J. Phys. Chem. B**, **117** (30) (2013) 9083-9093 doi: [10.1021/jp403768x](https://doi.org/10.1021/jp403768x)
30. Silvia Neamtu, Mihaela Mic, Mircea Bogdan and **Ioan Turcu**, *The artifactual nature of stavudine binding to human serum albumin. A fluorescence quenching and isothermal titration calorimetry study* **J. Pharm. Biomed. Anal.** **72** (18) (2013) 134-138. doi: [10.1016/j.jpba.2012.09.023](https://doi.org/10.1016/j.jpba.2012.09.023)
29. **Ioan Turcu** and Mircea Bogdan, *Size Dependence of Molecular Self-Assembling in Stacked Aggregates. 1. NMR Investigation of Ciprofloxacin Self-Association*, **J. Phys. Chem. B**, **116** (22) (2012) 6488-6498. doi: [10.1021/jp3034215](https://doi.org/10.1021/jp3034215)
28. Attila Bende and **Ioan Turcu**, *Nitrogen Substituted Phenothiazine Derivatives: Modelling of Molecular Self-Assembling*, **Int. J. Mol. Sci.** **12**, (2011) 3102-3116; doi: [10.3390/ijms12053102](https://doi.org/10.3390/ijms12053102)

27. Attila Bende Ion Grosu and **Ioan Turcu**, *Molecular Modeling of Phenothiazine Derivatives: Self-Assembling Properties* **J. Phys. Chem. A** **114** (47) (2010) 12479–12489 doi: [10.1021/jp105012g](https://doi.org/10.1021/jp105012g)
26. **Ioan Turcu** and Mikhail Kirillin, *Quasi-ballistic light scattering - analytical models versus Monte Carlo simulations*, **J. Phys.: Conf. Ser.** **182** (2009) 012035 (5pp) doi: [10.1088/1742-6596/182/1/012035](https://doi.org/10.1088/1742-6596/182/1/012035)
25. Attila Bende and **Ioan Turcu**, *Molecular modeling of the weakly bounded dimmers of some phenothiazine derivatives*, **J. Phys.: Conf. Ser.** **182** (2009) 012001 (4pp) doi: [10.1088/1742-6596/182/1/012001](https://doi.org/10.1088/1742-6596/182/1/012001)
24. Mihaela Mic, Dyanne Cruickshank and **Ioan Turcu**, *Assessment of molecular interaction in a cycluron-cyclodextrin inclusion complex*, **J. Phys.: Conf. Ser.** **182** (2009) 012011 (4pp) doi: [10.1088/1742-6596/182/1/012011](https://doi.org/10.1088/1742-6596/182/1/012011)
23. N Tosa, L Olenic, I Bratu, R Turdeanu and **I Turcu**, *Infrared and UV-Vis Spectroscopic Study of 3,7,10-Substituted-Phenothiazine Derivatives Adsorbed on Gold Nanoparticles* **J. Phys.: Conf. Ser.** **182** (2009) 012019 (5pp) doi: [10.1088/1742-6596/182/1/012019](https://doi.org/10.1088/1742-6596/182/1/012019)
22. Cristian Morari, Diana Bogdan, **Ioan Turcu**, *A first-principles study of conjugated thiol phenothiazine derivatives adsorbed on Au(111) surface*, **Cent. Eur. J. Phys.** (2009) 332-339, DOI: [10.2478/s11534-008-0128-8](https://doi.org/10.2478/s11534-008-0128-8)
21. N. Suci, C. Vamos, **I. Turcu**, C. V. L. Pop, L. I. Ciortea, *Global random walk modelling of transport in complex systems*, **Comput Visual Sci** **12** (2009) 77-85, DOI: [10.1007/s00791-007-0077-6](https://doi.org/10.1007/s00791-007-0077-6)
20. Raluca Turdean, Elena Bogdan, Anamaria Terec, Anca Petran, Laurian Vlase, **Ioan Turcu**, Ion Grosu, *Synthesis and structure of new 3,7,10-substituted-phenothiazine derivatives*, **Cent. Eur. J. Chem.** **7**(1) (2009) 111-117, DOI: [10.2478/s11532-008-0088-2](https://doi.org/10.2478/s11532-008-0088-2)
19. **I. Turcu**, *Effective phase function of light scattered at small angles by polydisperse particulate media* **Proc. SPIE**, **Vol. 7022**, 70220A (2008); DOI: [10.1117/12.803911](https://doi.org/10.1117/12.803911)
18. **Ioan Turcu**, Radu Bratfalean and Silvia Neamtu, *Narrowly peaked forward light scattering on particulate media II. Angular spreading of light scattered by polystyrene microspheres* **J. Opt. A: Pure Appl. Opt.** **10** (2008) 075007 (7pp), doi: [10.1088/1464-4258/10/7/075007](https://doi.org/10.1088/1464-4258/10/7/075007)
17. **Ioan Turcu** and Radu Bratfalean, *Narrowly peaked forward light scattering on particulate media I. Assessment of the multiple scattering contributions to the effective phase function* **J. Opt. A: Pure Appl. Opt.** **10** (2008) 015002. (8pp), doi: [10.1088/1464-4258/10/01/015002](https://doi.org/10.1088/1464-4258/10/01/015002)

16. D. Chicea and **I. Turcu**, *RWMCS – An alternative random walk Monte Carlo code to simulate light scattering in biological suspensions* **Optik** **118**, **5** (2007) 232-236, doi:[10.1016/j.ijleo.2006.02.008](https://doi.org/10.1016/j.ijleo.2006.02.008)
15. **I. Turcu**, C.V. L. Pop, Silvia Neamtu, *High-resolution angle-resolved measurements of light scattered at small angle by red blood cells in suspension*, **Appl. Opt.**, **45**, 9 (2006) 1964-1971, doi:[10.1364/AO.45.001964](https://doi.org/10.1364/AO.45.001964)
14. **I. Turcu**, *Effective phase function for light scattered by blood*, **Appl. Opt.** **45**, 4 (2006) 639-647, doi: [10.1364/AO.45.000639](https://doi.org/10.1364/AO.45.000639)
13. **I. Turcu**, *Effective phase function for light scattered by disperse systems - the small-angle approximation*, **J. Opt. A: Pure Appl. Opt.** **6** (2004) 537–543, doi: [10.1088/1464-4258/6/6/007](https://doi.org/10.1088/1464-4258/6/6/007)
12. Silvia Neamtu, V.V. Morariu, **I. Turcu**, Alina Hațegan-Popescu, Lorelai Copăescu *Pore resealing inactivation in electroporated erythrocyte membrane irradiated with electrons*, **Bioelectrochem. Bioenerg.** **48** (1999) 441-445, doi: [10.1016/S0302-4598\(99\)00044-6](https://doi.org/10.1016/S0302-4598(99)00044-6)
11. D. Dădarlat, S. Neamtu, L.I. Copăescu, V.V. Morariu, **I. Turcu**, M. Chirtoc, A. Hațegan-Popescu, D. Bicanic, J.S. Antoniow, E. Egee, *Photopyroelectric study of thermal parameters of food and biological products*, **High Temperatures - High Pressures**, **30** (1998) 189, doi: [10.1068/htec72](https://doi.org/10.1068/htec72)
10. **I. Turcu**, *A Generic Model for the Fröhlich Rate Equations*, **Phys.Lett.A** **234** (1997) 181-186, doi: [10.1016/S0375-9601\(97\)00500-8](https://doi.org/10.1016/S0375-9601(97)00500-8)
9. C. Vamoș, A. Georgescu, N. Suciuc and **I. Turcu**, *Balance equations for physical systems with corpuscular structure*, **Physica A** **227** (1996) 81-92, doi: [10.1016/0378-4371\(95\)00373-8](https://doi.org/10.1016/0378-4371(95)00373-8)
8. **I. Turcu**, S. Neamtu, *Dimensional distribution of human erythrocytes obtained from electroporabilization experiments*, **Biochim. Biophys. Acta** **1238** (1995) 81-85, doi:[10.1016/0005-2736\(95\)00090-P](https://doi.org/10.1016/0005-2736(95)00090-P)
7. **I. Turcu**, C.M. Lucaciu, *Electrorotation - A Spherical Shell Model*, **J. Phys. A:Math. Gen.** **22** (1989) 995-1003, doi: [10.1088/0305-4470/22/8/015](https://doi.org/10.1088/0305-4470/22/8/015)
6. **I. Turcu**, C.M. Lucaciu, *Dielectrophoresis - A Spherical Shell Model*, **J. Phys. A:Math. Gen.** **22** (1989) 985-993, doi: [10.1088/0305-4470/22/8/014](https://doi.org/10.1088/0305-4470/22/8/014)
5. **I. Turcu**, *Thermal Effects in a Simple Nonequilibrium Vibrational Condensation Model*, **Proceedings of the International Seminar "Biophysical Aspects of Cancer"**, J.Fiala, J.Pokorny eds., Prague July 6-9 (1987) 162
4. **I. Turcu**, *Electric Field Induced Rotations of Spheres*, **J. Phys. A:Math. Gen.** **20**, **11** (1987) 3301-3307, doi: [10.1088/0305-4470/20/11/033](https://doi.org/10.1088/0305-4470/20/11/033)

3. **I. Turcu**, *A Laser-Like Model of Vibrational Condensation*, **Phys. Lett. A** **116**, **9** (1986) 429-431, doi:[10.1016/0375-9601\(86\)90376-2](https://doi.org/10.1016/0375-9601(86)90376-2)

2. A. Aldea, **I. Turcu**, *Electromagnetic Effects in Magnetic Superconductors*, **Phys. Rev. B** **29** (1984) 6213-6217, DOI:[10.1103/PhysRevB.29.6213](https://doi.org/10.1103/PhysRevB.29.6213)

1. **I. Turcu**, A. Aldea, *Selfconsistent Microscopic Approach of the Meissner Effect in Magnetic Superconductors*, **Physica** **126 A** (1984) 520-528, doi: [10.1016/0378-4371\(84\)90216-4](https://doi.org/10.1016/0378-4371(84)90216-4)