

Biomolecular Physics Center

Raman-SPM Lab



Publications

97. Simona Cinta Pinzaru, Dana Alina Magdas, Ag Nanoparticles Meet Wines: SERS for Wine Analysis, *Food Analytical Methods*, 11 (2018), 892-900, DOI: 10.1007/s12161-017-1056-2
96. Dana Alina Magdas, Simona Cinta Pinzaru, François Guyon, Ioana Feher, Bogdan Ionut Cozar, Application of SERS technique in white wines discrimination, *Food Control*, 92 (2018) 30-36
95. Dana Alina Magdas, François Guyonb, Ioana Feher, Simona Cinta Pinzaru, Wine discrimination based on chemometric analysis of untargeted markers using FT-Raman spectroscopy, *Food Control*, 85 (2018) 385-391, DOI: 10.1016/j.foodcont.2017.10.024
94. Alexandra Falamas, Cristina A. Dehelean, Simona Cinta Pinzaru, Monitoring of betulin nanoemulsion treatment and molecular changes in mouse skin cancer using surface enhanced Raman spectroscopy, *Vibrational Spectroscopy*, 95 (2018) 44-50, DOI: 10.1016/j.vibspec.2018.01.004
93. Pînzaru, S.C., Kiefer, W., Raman's discovery in historical context, *Springer Series in Surface Sciences*, 66 (2018), 3-21.
92. Cîntă Pînzaru, S., Fălămaș, A., Dehelean, C.A., Raman Spectroscopy: A Key Analytical Tool for New Drugs Research and Development, *Studies in Natural Products Chemistry*, 61 (2018) 211-250
91. Andrei Stefanu, Vlad Moisoiu, Razvan Couti, Iulia Andras, Razvan Rahota, Dana Crisan, Ioana E Pavel, Carmen Socaciu, Nicolae Leopold, Nicolae Crisan, Combining SERS analysis of serum with PSA levels for improving the detection of prostate cancer, *Nanomedicine*, 13 (2018) 2455-2467, DOI: 10.2217/nnm-2018-0127
90. Ancuta Jurj, Laura Pop, Bobe Petrushev, Sergiu Pasca, Delia Dima, Ioana Frinc, Dalma Deak, Minodora Desmirean, Adrian Trifa, Bogdan Fetica, Grigore Gafencu, Sonia Selicean, Vlad Moisoiu, Wilhelm-Thomas Micu, Cristian Berce, Alexandra Sacu, Alin Moldovan, Andrei Colita, Horia Bumbea, Alina Tanase, Angela Dascalescu, Mihnea Zdrenghea, Rares Stiufiuc, Nicolae Leopold, Romulus Tetean, Emil Burzo, Ciprian Tomuleasa & Ioana Berindan-Neagoe, Exosome-carried microRNA-based signature as a cellular trigger for the evolution of chronic lymphocytic leukemia into Richter syndrome, *Critical Reviews in Clinical Laboratory Sciences*, 55:7 (2018) 501-515, DOI: 10.1080/10408363.2018.1499707
89. Augustin C.Mot, Cristina Bischina, Grigore Damian, Amr A.A.Attia, EmeseGal, Nicoleta Dina, Nicolae Leopold, RaduSilaghi-Dumitrescu, Fe(III) - Sulfide interaction in globins: Characterization and quest for a putative Fe(IV)-sulfide species, *Journal of Inorganic Biochemistry*, 179 (2018) 32-39, DOI: 10.1016/j.jinorgbio.2017.10.015
88. Nicolae Leopold, Andrei Stefanu, Krisztian Herman, István Sz. Tódor, Stefania D. Iancu, Vlad Moisoiu, Loredana F. Leopold, The role of adatoms in chloride-activated colloidal silver nanoparticles for surface-enhanced Raman scattering enhancement, *Beilstein J. Nanotechnol.*, 9 (2018) 2236-2247, DOI:10.3762/bjnano.9.208

87. Raluca M. POP, Ion Cosmin PUJA, Aida PUJA, Veronica S. CHEDEA, Nicolae LEOPOLD, Ioana C. BOCSAN, Anca D. BUZOIANU, Characterization of *Trametes versicolor*: Medicinal Mushroom with Important Health Benefits, *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 2018, 343-349, DOI: 10.15835/nbha46211132.
86. Stefancu, Andrei; Moisoiu, Vlad; Bocsa, Corina; Balint, Zoltan; Cosma, Daniel; Veresiu, Ioan; Chis, Vasile; Leopold, Nicolae; Elec, Florin, SERS-based quantification of albuminuria in the normal-to-mildly increased range, *Analyst*, 143 (2018) 5372-5379, DOI: 10.1039/C8AN01072B, 0003-2654
85. Reka-Anita Domokos, Monica Potara, Simion Aștilean, Vasile Chiș, Adsorption of Trans- and cis-Resveratrol on Graphene, *Physica Status Solidi B*, (2018) 1800335, DOI: 10.1002/pssb.201800335, 0370-1972
84. Simona Cîntă Pinzaru, Csilla Müller, Ivana Ujević, Monica M. Venter, Vasile Chis, Branko Glamuzina, Lipophilic marine biotoxins SERS sensing in solutions and in mussel tissue, *Talanta*, 187 (2018) 47-58, DOI: <https://doi.org/10.1016/j.talanta.2018.05.006>, 0039-9140
83. Tomislav Benković, Adriana Kendel, Jelena Parlov-Vuković, Darko Kontrec, Vasile Chis, Snezana Miljanic, Nives Galic, Multiple dynamics of aroylhydrazone induced by mutual effect of solvent and light - spectroscopic and computational study, *Journal of Molecular Liquids*, 255 (2018) 18-25, DOI: 10.1016/j.molliq.2018.01.158, 0167-7322
82. Dina, Nicoleta Elena; Gherman, Ana Maria Raluca; Chis, Vasile; Sarbu, Costel; Wieser, Andreas; Bauer, David; Haisch, Christoph, Characterization of clinically relevant fungi via SERS fingerprinting assisted by novel chemometric models, *Analytical Chemistry*, 90 (2018) 2484-2492, DOI: 10.1021/acs.analchem.7b03124., 0003-2700
81. Fran Nekvapil, Ioana Brezestean, Daniel Barchewitz, Branko Glamuzina, Vasile Chis, Simona Cîntă Pinzaru, Citrus fruits freshness assessment using Raman spectroscopy, *Food Chemistry*, 240 (2018) 560-567, DOI: 10.1016/j.foodchem.2017.09.105
80. T. Benković, A. Kendel, J. Parlov-Vuković, D. Kontrec, V. Chiș, S. Miljanić, N. Galić, Aromatic hydrazones derived from nicotinic acid hydrazide as fluorimetric pH sensing molecules: structural analysis by computational and spectroscopic methods in solid phase and in solution, *Spectrochimica Acta A*, 190 (2018) 259-267, DOI: 10.1016/j.saa.2017.09.038
79. Balan, C., Chis, M.I., Rachisan, A.L., Baia, M., A vibrational study of inulin by means of experimental and theoretical methods, *Journal of Molecular Structure*, 1164 (2018) 84-88.
78. Raluca Luchian, Emil Vințeler, Cosmina Chiș, Mihai Vasilescu, Nicolae Leopold, João P. Prates Ramalho, Vasile Chiș, Conformational preference and spectroscopical characteristics of the active pharmaceutical ingredient Levetiracetam, *Journal of Pharmaceutical Sciences*, 106 (2017) 3564-3573, DOI: 10.1016/j.xphs.2017.08.008
77. Gui, O.-M., Cîntă Pînzaru, S., Hydrophobic painting materials fast detection using temperature dependence SERS on simple or PEGylated Ag nanoparticles, *Dyes and Pigments*, 146 (2017) 551-557
76. Augustin C. Moț, Marcel Pârveu, Alina E. Pârveu, Oana Roșca-Casian, Nicoleta E. Dina, Nicolae Leopold, Radu Silaghi-Dumitrescu & Cristina Mircea, Reversible naftifine-induced carotenoid

depigmentation in *Rhodotorula mucilaginosa* (A. Jörg.) F.C. Harrison causing onychomycosis, *Scientific Reports*, 11125 (2017)

75. Loredana Florina Leopold, István Szabolcs Tódor, Zorița Diaconeasa, Dumitrița Rugină, Andrei Ștefancu, Nicolae Leopold, Cristina Coman, Assessment of PEG and BSA-PEG gold nanoparticles cellular interaction, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 532 (2017) 70-76.

74. Alia Colniță, Nicoleta Elena Dina, Nicolae Leopold, Dan Cristian Vodnar, Diana Bogdan, Sebastian Alin Porav, Leontin David, Characterization and Discrimination of Gram-Positive Bacteria Using Raman Spectroscopy with the Aid of Principal Component Analysis, *Nanomaterials* 7 (2017) 24, DOI: 10.3390/nano7090248

73. Nicoleta Elena Dina, Anda Leș, Andreea Baricz, Tiberiu Szöke-Nagy, Nicolae Leopold, Costel Sârbu, Horia Leonard Banciu, Discrimination of haloarchaeal genera using Raman spectroscopy and robust methods for multivariate data analysis, *Journal of Raman Spectroscopy*, 48 (2017) 1122-1126, DOI: [10.1002/jrs.5187](https://doi.org/10.1002/jrs.5187)

72. Cristina Bischin, Augustin Mot, Andrei Ștefancu, Nicolae Leopold, Denisa Hathazi, Grigore Damian, Radu Silaghi-Dumitrescu, Chlorite reactivity with myoglobin: Analogy with peroxide and nitrite chemistry? *Journal of Inorganic Biochemistry*, 172 (2017) 122-128, DOI: 10.1016/j.jinorgbio.2017.04.017

71. N. E. Dina, H. Zhou, A. Colniță, N. Leopold, T. Szöke-Nagy, C. Coman, C. Haisch, Rapid single-cell detection and identification of pathogens by using surface-enhanced Raman spectroscopy, *Analyst*, 142 (2017) 1782-1789, DOI: 10.1039/C7AN00106A

70. Adrian-Ștefan Andrei, Manuela R. Păușan, Tudor Tămaș, Nicolae Har, Lucian Barbu-Tudoran, Nicolae Leopold and Horia L. Banciu, Diversity and Biomineralization Potential of the Epilithic Bacterial Communities Inhabiting the Oldest Public Stone Monument of Cluj-Napoca (Transylvania, Romania), *Front. Microbiol.*, 2017, DOI: 10.3389/fmicb.2017.00372

69. Mircescu, N.E.D., Muntean, C.M., Leopold, N., Discrimination of grapevine genomic DNA using surface-enhanced raman spectroscopy and PCA, *NATO Science for Peace and Security Series B: Physics and Biophysics*, 2017, 499-500

68. Oana-M. Buja, Ovidiu D. Gordan, Nicolae Leopold, Andreas Morschhauser, Jörg Nestler and Dietrich R. T. Zahn, Microfluidic setup for on-line SERS monitoring using laser induced nanoparticle spots as SERS active substrate, *Beilstein Journal of Nanotechnology*, 8 (2017) 237-243, DOI: 10.3762/bjnano.8.26

67. Snežana Miljanić, Adriana Dijanošić, Morana Novak, Todor G. Deliqeorqiev, Ivo Crnolatac, Ivo Piantanida, Vasile Chiș, Distinguishing Binding Modes of a New Phosphonium Dye with DNA by Surface-Enhanced Raman Spectroscopy, *RSC Advances*, 6 (2016) 41927-41936

66. Anca Farcas, Cristian Iacovita, Emil Vinteler, Vasile Chiș, Rares Stiuftuc and Constantin Mihai Lucaci, The Influence Of Molecular Structure Modifications On Vibrational Properties Of Some Beta Blockers: A Combined Raman And Dft Study, *Journal of Spectroscopy*, 2016, ID 3137140, 1-9

65. Raluca Luchian, Emil Vințeler, Cosmina Chiș, Mihai Vasilescu, Nicolae Leopold, Vasile Chiș, Molecular structure of phenytoin: NMR, UV-Vis and quantum chemical calculations, *Croatica Chemica Acta*, 88 (2015) 511-522

64. S. Cintă Pinzaru, Cs. Müller, I. S. Tódor, B. Glamuzina, V. Chis, NIR-Raman spectrum and DFT calculations of okadaic acid DSP marine biotoxin microprobe, *Journal of Raman Spectroscopy*, 2016, 47, 636–642
63. Nicoleta E. Dina, Cristina M. Muntean, Nicolae Leopold, Alexandra Fălămaș, Adela Halmagyi, Ana Coste, Structural Changes Induced in Grapevine (*Vitis vinifera* L.) DNA by Femtosecond IR Laser Pulses: A Surface-Enhanced Raman Spectroscopic Study, *Nanomaterials* 2016, 6(6), 96
62. Oana T. Marisca, Karsten Kantner, Christian Pfeiffer, Qian Zhang, Beatriz Pelaz, Nicolae Leopold, Wolfgang J. Parak, Joanna Rejman, Comparison of the in Vitro Uptake and Toxicity of Collagen- and Synthetic Polymer-Coated Gold Nanoparticles, *Nanomaterials* 2015, 5(3), 1418-1430
61. R. A. Boitor, I. Sz. Tódor, L. F. Leopold, N. Leopold, Room Temperature Synthesis of Highly Monodisperse and Sers-Active Glucose-Reduced Gold Nanoparticles, *Journal of Applied Spectroscopy*, 2015, 82 (3) 415–419
60. Cristina M. Muntean, Nicolae Leopold, Carmen Tripon, Ana Coste, Adela Halmagyi, Surface-enhanced Raman spectroscopy of genomic DNA from in vitro grown tomato (*Lycopersicon esculentum* Mill.) cultivars before and after plant cryopreservation, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 144 (2015) 107–114
59. Cristina M. Muntean, Ioan Bratu, Nicolae Leopold, Cristian Morari, Luiza Buimaga-Iarinca, Monica A. P. Purcaru, Subpicosecond surface dynamics in genomic DNA from in vitro-grown plant species: a SERS assessment, *Phys. Chem. Chem. Phys.*, 2015, 17, 21323-21330
58. Coman, C., Leopold, L.F., Rugină, O.-D., Diaconeasa, Z., Bolfă, P.F., Leopold, N., Tofană, M., Socaciu, C., Protein-capped gold nanoparticles obtained by a green synthesis method, *Studia Universitatis Babes-Bolyai Chemia*, 2015, 60, 119-126
57. Simona Cinta Pinzaru, Csilla Müller, Sanja Tomšić, Monica M. Venter, Ioana Brezestean, Stijepo Ljubimir and Branko Glamuzina, Live diatoms facing Ag nanoparticles: surface enhanced Raman scattering of bulk *Cylindrotheca closterium* pennate diatoms and of the single cells, *RSC Adv.*, 2016, 6, 42899-42910
56. Cintă Pinzaru, S.; Müller, Cs.; Tomšić, S.; Venter, M. M.; Cozar, B. I.; Glamuzina, B., New SERS feature of β -carotene: consequences for quantitative SERS analysis, *Journal of Raman Spectroscopy*, 2015, 46, 597-604
55. Brezestean, I., Har, N., Tantău, A., Gorea, M., Venter, M.M., Pînzaru, S.C., Analytical study of gallstones in patients from Transylvania, Romania, *Studia Universitatis Babes-Bolyai Chemia*, 2015, 60 (1), 29-43
54. Foris V, Kovacs G, Marsh LM, Bálint Z, Tötsch M, Avian A, Douschan P, Ghanim B, Klepetko W, Olschewski A, Olschewski H. 2016. CD133+ cells in pulmonary arterial hypertension. *Eur Respir J*. 2016 Aug;48(2):459-69
53. Kovacs G, Kleinschek D, Kwapiszewska G, Bálint Z, Olschewski H and Olschewski A. 2016 [Research in Austria - the Ludwig Boltzmann Institute for Lung Vascular Research]. *Pneumologie* 70(5):331-335
52. Jandl K, Stacher E, Bálint Z, Sturm E, Maric J, Peinhaupt M, Luschnig P, Aringer I, Fauland A, Konya V, Dahlen SE, Wheelock CE, Kratky D, Olschewski A, Marsche G, Schuligoi R, Heinemann

- A. 2016. Activated prostaglandin D2 receptors on macrophages enhance neutrophil recruitment into the lung. *Journal of Allergy Clinical Immunology* doi:10.1016/j.jaci.2015.11.012
51. Didiasova M, Zakrzewicz D, Magdolen V, Nagaraj C, Bálint Z, Rohde M, Preissner KT, Wygrecka M. 2015. STIM1/ORAI1-mediated Ca²⁺ influx regulates enolase-1 exteriorization. *Journal of Biological Chemistry*. 2015 May 8;290(19):11983-99
50. Veith C, Zakrzewicz D, Dahal B, Bálint Z, Murmann K, Wygrecka M, Seeger W, Schermuly R, Weissmann N and G. Kwapiszewska. 2014. Hypoxia- or PDGF-BB-dependent paxillin tyrosine phosphorylation in pulmonary hypertension is reversed by HIF-1 α depletion or imatinib treatment. *Thromb Haemost*. 2014 Dec; 112 (6): 1288-303
49. Balenga NA, Martínez-Pinilla E, Kargl J, Schröder R, Peinhaupt M, Platzer W, Bálint Z, Zamarbide M, Dopeso-Reyes I, Ricobaraza A, Pérez-Ortiz JM, Kostenis E, Waldhoer M, Heinemann A, Franco R.. 2014. Heteromerization of GPR55 and cannabinoid CB2 receptors modulates signalling. *Br J Pharmacol* – 2014 Dec; 171(23): 5387-406
48. Zabini D, A Heinemann, V Foris, C Nagaraj, P Nierlich, Z Bálint, G Kwapiszewska, IM Lang, W Klepetko, H Olschewski and A Olschewski. 2014. Comprehensive analysis of inflammatory markers in CTEPH patients. *Eur Respir J*- 2014 Oct; 44(4):951-62
47. Crnkovic S, Egemnazarov B, Seay U, Gattinger N, Marsh LM, Bálint Z, Kovacs G, Ghanim B, Klepetko W, Schermuly RT, Weissmann N, Olschewski A, Kwapiszewska G. 2014. NPY/NPY1R mediated vasoconstrictory and proliferative effects in pulmonary hypertension. *Br J Pharmacol* - 2014 Aug; 171(16):3895-907
46. Helmberger M, M Pienn, M Urschler, P Kullnig, R Stollberger, G Kovacs, A Olschewski, H Olschewski and Z Bálint. 2014. Quantification of tortuosity and fractal dimension of the lung vessels in pulmonary hypertension patients. *PLoS One*. 9(1):e87515
45. Pienn M, Kovacs G, Tscherner M, Avian A, Johnson TR, Kullnig P, Stollberger R, Olschewski A, Olschewski H and Bálint Z. 2014. Non-invasive determination of pulmonary hypertension with dynamic contrast-enhanced computed tomography: a pilot study. *European Radiology* 24(3):668-676
44. Emil Vințeler, Nicoleta-Florina Stan, Raluca Luchian, Călin Căinap, João P. Prates-Ramalho, Vasile Chiș, Conformational landscape and low lying excited states of imatinib, *Journal of Molecular Modeling*, 2015, 21, 84
43. Rares Stiufiuc, Cristian Iacovita, Gabriela Stiufiuc, Ede Bodoki, Vasile Chiș, Constantin M. Lucaciu, Surface mediated chiral interactions between cyclodextrins and propranolol enantiomers: a SERS and DFT study, *Physical Chemistry Chemical Physics*, 2015, 17, 1281-1289.
42. István Sz. Tódor, László Szabó, Oana T. Marișca, Vasile Chiș, Nicolae Leopold, Gold nanoparticle assemblies of controllable size obtained by hydroxylamine reduction at room temperature, *Journal of Nanoparticle Research*, 16 (2014) 2740
41. Nicolae Leopold, João P. Prates Ramalho, Vasile Chiș, Adsorption of sulfamethoxazole molecule on silver colloids: A joint SERS and DFT study, Alia Ungurean, Mircea Oltean, Leontin David, *Journal of Molecular Structure*, 1073 (2014) 71-76
40. László Szabó, Krisztian Herman, Nicoleta Elena Mircescu, István Szabolcs Tódor, Botond Lorand Simon, Radu Alex Boitor, Nicolae Leopold, Vasile Chiș, Surface-enhanced Raman

scattering and DFT investigation of 1,5-diphenylcarbazine and its metal complexes with Ca(II), Mn(II), Fe(III) and Cu(II), *Journal of Molecular Structure*, 1073 (2014) 10-17

39. Buja, O.M., Mircescu, N.E., Leopold, N., Raman Scattering Enhancement of Peg Coated Gold Nanoparticles of Defined Size, *Journal of Applied Spectroscopy*, 2014, 81, 411-415

38. Coman, C., Leopold, L.F., Rugină, O.D., Barbu-Tudoran, L., Leopold, N., Tofană, M., Socaciu, C., Green synthesis of gold nanoparticles by *Allium sativum* extract and their assessment as SERS substrate, *Journal of Nanoparticle Research*, 2014, 16

37. Vlad, I.E., Marisca, O.T., Vulpoi, A., Simon, S., Leopold, N., Anghel, S.D., Simple approach for gold nanoparticle synthesis using an Ar-bubbled plasma setup, *Journal of Nanoparticle Research*, 2014, 16, 1-11

36. Nicoleta E. Mircescu, Haibo Zhou, Nicolae Leopold, Vasile Chiş, Natalia P. Ivleva, Reinhard Niessner, Towards a receptor-free immobilization and SERS detection of urinary tract infections causative pathogens, *Analytical and Bioanalytical Chemistry*, 406 (2014) 3051-3058

35. Csilla Müller, Leontin David, Vasile Chiş, Simona Cintă Pînzaru, Detection of thiabendazole applied on citrus fruits and bananas using surface enhanced Raman scattering, *Food Chemistry*, 145 (2014) 814-820

34. Müller, C., Glamuzina, B., Pozniak, I., Weber, K., Cialla, D., Popp, J., Cinta Pinzaru, S., Amnesic shellfish poisoning biotoxin detection in seawater using pure or amino-functionalized Ag nanoparticles and SERS, *Talanta*, 2014, 130, 108-115

33. K Herman, NE Mircescu, L Szabo, LF Leopold, V Chiş, N Leopold, *In situ* silver Spot Preparation and on-Plate Surface-Enhanced Raman Scattering Detection in Thin Layer Chromatography Separation, *Journal of Applied Spectroscopy*, 80 (2013) 311-314

32. Pinzaru, S.C., Falamas, A., Dehelean, C., Morari, C., Venter, M., Double amino functionalized ag nanoparticles as SERS tags in raman diagnostic, *Croatica Chemica Acta*, 2013, 86, 233-244

31. Yang, D., Mircescu, N.E., Zhou, H., Leopold, N., Chiş, V., Oltean, M., Ying, Y., Haisch, C., DFT study and quantitative detection by surface-enhanced Raman scattering (SERS) of ethyl carbamate, *Journal of Raman Spectroscopy*, 44 (2013) 1491-1496

30. Leopold, N., Chiş, V., Mircescu, N.E., Marişca, O.T., Buja, O.M., Leopold, L.F., Socaciu, C., Braicu, C., Irimie, A., Berindan-Neagoe, I., One step synthesis of SERS active colloidal gold nanoparticles by reduction with polyethylene glycol, 2013, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 436, 133-138

29. Muntean, C.M., Leopold, N., Halmagyi, A., Valimareanu, S., Surface-enhanced Raman scattering assessment of DNA from leaf tissues adsorbed on silver colloidal nanoparticles, 2013, *Journal of Raman Spectroscopy*, 44, 817-822

28. Herman, K., Mircescu, N.E., Szabo, L., Leopold, L.F., Chiş, V., Leopold, N., *In Situ* silver spot preparation and on-plate surface-enhanced Raman scattering detection in thin layer chromatography separation, 2013, *Journal of Applied Spectroscopy*, 80, 311-314

27. Stiufiuc, R., Iacovita, C., Lucaciu, C.M., Stiufiuc, G., Dutu, A.G., Braescu, C., Leopold, N., SERS-active silver colloids prepared by reduction of silver nitrate with short-chain polyethylene glycol, 2013, *Nanoscale Research Letters*, 8, 1-5

26. Ungurean, A., Leopold, N., David, L., Chiş, V., Vibrational spectroscopic and DFT study of trimethoprim, 2013, *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 102, 52-58
25. Stiufiuc, R., Iacovita, C., Lucaciu, C.M., Stiufiuc, G., Nicoara, R., Oltean, M., Chis, V., Bodoki, E., Adsorption geometry of propranolol enantiomers on silver nanoparticles, 2013, *Journal of Molecular Structure*, 1031, 201-206
24. Mircescu, N.E., Oltean, M., Chis, V., Leopold, N., FTIR, FT-Raman, SERS and DFT study on melamine, 2012, *Vibrational Spectroscopy*, 62, 165-171
23. Lekprasert, B., Korolkov, V., Falamas, A., Chis, V., Roberts, C.J., Tendler, S.J., Notingher, I., Investigations of the supramolecular structure of individual diphenylalanine nano- and microtubes by polarized Raman microspectroscopy., 2012, *Biomacromolecules*, 13, 2181-2187
22. Szabó, L., Herman, K., Mircescu, N.E., Fălămaş, A., Leopold, L.F., Leopold, N., Buzumurgă, C., Chiş, V., SERS and DFT investigation of 1-(2-pyridylazo)-2-naphthol and its metal complexes with Al(III), Mn(II), Fe(III), Cu(II), Zn(II) and Pb(II), 2012, *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 93, 266-273
21. Boca, S., Rugina, D., Pinteana, A., Leopold, N., Astilean, S., Designing gold nanoparticle-ensembles as surface enhanced raman scattering tags inside human retinal cells, 2012, *Journal of Nanotechnology*, , -
20. Mircescu, N.E., Varvescu, A., Herman, K., Chiş, V., Leopold, N., Surface-enhanced Raman and DFT study on zidovudine, 2011, *Spectroscopy*, 26, 311-315
19. Muntean, C.M., Bratu, I., Leopold, N., Molecular relaxation processes in genomic DNA from leaf tissues: A surface-enhanced Raman spectroscopic study, 2011, *Spectroscopy*, 26, 245-254
18. Muntean, C.M., Leopold, N., Halmagyi, A., Valimareanu, S., Surface-enhanced Raman spectroscopy of genomic DNA from in vitro grown plant species, 2011, *Journal of Raman Spectroscopy*, 42, 1925-1931
17. Muntean, C.M., Bratu, I., Leopold, N., Purcaru, M.A.P., Subpicosecond dynamics in DNA from leaves of in vitro-grown apple plants: A SERS study, 2011, *Spectroscopy*, 26, 59-68
16. Mureşan-Pop, M., Kacsó, I., Filip, X., Vanea, E., Borodi, G., Leopold, N., Bratu, I., Simon, S., Spectroscopic and physical-chemical characterization of ambazone-glutamate salt, 2011, *Spectroscopy*, 26, 115-128
15. Ştefan, R., Bratu, I., Borodi, G., Leopold, N., Simon, V., Structural investigations of AG20-B203-CAO-P205 glass and glass-ceramic system, 2011, *Studia Universitatis Babeş-Bolyai Chimia*, , 177-188
14. Szabó, L., Herman, K., Leopold, N., Buzumurgă, C., Chiş, V., Surface-enhanced Raman scattering and DFT investigation of Eriochrome Black T metal chelating compound, 2011, *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 79, 226-231
13. Szabó, L., Leopold, L.F., Cozar, B.I., Leopold, N., Herman, K., Chiş, V., SERS approach for Zn(II) detection in contaminated soil, 2011, *Central European Journal of Chemistry*, 9, 410-414
12. Cozar, I.B., Szabó, L., Leopold, N., Chiş, V., Cozar, O., David, L., IR, Raman, SERS and DFT study of pindolol and verapamil, 2011, *Journal of Molecular Structure*, 993, 308-315

11. Cozar, I.B., Szabó, L., Mare, D., Leopold, N., David, L., Chiş, V., IR, Raman, SERS and DFT study of paroxetine, 2011, *Journal of Molecular Structure*, 993, 243-248
10. Bebu, A., Szabó, L., Leopold, N., Berindean, C., David, L., IR, Raman, SERS and DFT study of amoxicillin, 2011, *Journal of Molecular Structure*, 993, 52-56
9. Cozar, O., Szabó, L., Cozar, I.B., Leopold, N., David, L., Cinap, C., Chiş, V., Spectroscopic and DFT study of atenolol and metoprolol and their copper complexes, 2011, *Journal of Molecular Structure*, 993, 357-366
8. Herman, K., Szabó, L., Leopold, L.F., Chiş, V., Leopold, N., In situ laser-induced photochemical silver substrate synthesis and sequential SERS detection in a flow cell, 2011, *Analytical and Bioanalytical Chemistry*, 400, 815-820
7. Muntean, C.M., Leopold, N., Halmagyi, A., Valimareanu, S., Surface-enhanced Raman spectroscopy of DNA from leaves of in vitro grown apple plants, 2011, *Journal of Raman Spectroscopy*, 42, 844-850
6. Muntean, C.M., Leopold, N., Halmagyi, A., Valimareanu, S., Ultrasensitive detection of genomic DNA from apple leaf tissues, using surface-enhanced Raman scattering, 2011, *Spectroscopy*, 25, 33-43
5. Cozar, I.B., Szabó, L., Leopold, N., Chiş, V., David, L., Raman, sers and dft study of atenolol and metoprolol cardiovascular drugs, 2010, *Romanian Reports of Physics*, 55, 772-781
4. Schäfer, P., Himcinschi, C., Chiş, V., Zahn, D.R.T., In situ Raman growth monitoring of indium/copper phthalocyanine interfaces, 2010, *Physica Status Solidi (C) Current Topics in Solid State Physics*, 7, 232-235
3. Leopold, N., Cîntă-Pînzaru, S., Szabó, L., Ileşan, D., Chiş, V., Cozar, O., Kiefer, W., Raman and SERS study of metoclopramide at different pH values, 2010, *Journal of Raman Spectroscopy*, 41, 248-255
2. Leopold, N., Lendl, B., On-column silver substrate synthesis and surface-enhanced Raman detection in capillary electrophoresis, 2010, *Analytical and Bioanalytical Chemistry*, 396, 2341-2348
1. Steinhauser, G., Giester, G., Leopold, N., Wagner, C., Villa, M., Musilek, A., Nitrogen-rich compounds of the lanthanoids: Highlights and summary, 2010, *Helvetica Chimica Acta*, 93, 183-202