

EVANGELIA SARANTOPOULOU

PUBLICATIONS (-May 2011)

A. HONORS THESIS

1. “Characterization of Light Emitting Diode systems”, Physics Department, University of Athens, Greece (1988).

B. Ph.D. THESIS

1. “VUV spectroscopy using a molecular fluorine laser of: a) dielectric crystals doped with rare- earth ions b) small mercury clusters.” Physics Department, University of Athens, Greece (1996).

C. BOOK CHAPTERS

1. “Spectroscopy and applications of diatomic and triatomic molecules assisted by laser light at 157.6 nm”, A. C. Cefalas and E. Sarantopoulou in “Ultraviolet spectroscopy and UV lasers”, Marcel and Dekker (eds.), pp.191-227, New York 2002. ISBN: 978-0-8247- 0668-5 (hardback), 978-0-8247-4406-9 (electronic).

2. “VUV Laser Spectroscopy of Trivalent Rare Earth Ions in Wide Band-Gap Fluoride Crystals.”, E. Sarantopoulou and A. C. Cefalas in “Ultraviolet spectroscopy and UV lasers”, Marcel and Dekker (eds.), pp. 281-336, New York 2002. ISBN: 978-0-8247- 0668-5 (hardback), 978-0-8247-4406-9 (electronic).

3. “Lasers and Biodeterioration”, I. Gomoiu, R. Radvan, E. Sarantopoulou and A. C. Cefalas in “Handbook on the Use of Lasers in Conservation and Conservation Science”, M.Schreiner and M. Strlic (eds.), publisher: COST office, G7 2006. (<http://www.science4heritage.org/COSTG7/booklet/>) ISBN-10: 973 88109 30.

D. PAPERS IN REFEREED JOURNALS

1. “Long term oxidization and phase transition of InN nanotextures”, E. Sarantopoulou, Z. Kollia, G. Drazic, S. Kobe and N. Spyropoulos-Antonakakis to be published in Nanoscale Res. Lett. (2011).

2. "MOCVD cobalt oxide deposition from inclusion complexes: Decomposition mechanism, structure, and properties", N.D Papadopoulos, H.S. Karayianni, P.E. Tsakiridis, M. Perraki, E. Sarantopoulou and E. Hristoforou, *J. Electrochem. Soc.* **158**, 5 (2011).
3. "Interplanetary survival probability of *Aspergillus terreus* spores under simulated solar vacuum ultraviolet irradiation", E. Sarantopoulou, I. Gomoiu, Z. Kollia and A.C. Cefalas, *Planet. Space Sci.* **59**, 63 (2011).
4. "Graphene oxide with covalently linked porphyrin antennae: Synthesis, characterization and photophysical properties", N. Karousis, A.S.D. Sandanayaka, T. Hasobe, S.P. Economopoulos, E. Sarantopoulou and N. Tagmatarchis, *J. Mater. Chem.* **21**, 109 (2011).
5. "Formation of core-shell and hollow nanospheres through the nanoscale melt-solidification effect in the Sm-Fe(Ta)-N system", S. Sturm, K.Z. Rozman, B. Markoli, E. Sarantopoulou, Z. Kollia, A.C. Cefalas and S. Kobe, *Nanotechnol.* **21**, 485603 (2010).
6. "Magnetic Field Trapping in Coherent Antisymmetric States of Liquid Water Molecular Rotors", A. C. Cefalas, E. Sarantopoulou, Z. Kollia, C. Riziotis, G. Dražić, S. Kobe, J. Stražičar, and A. Meden, *J. Comput. Theor. Nanosci.* **7**, 1800 (2010).
7. "Effect of 193 and 157 nm laser light illumination on the surface properties of TMOS-NiCl₂ sol-gel derived material", L. Athanasekos, Z. Kollia, M. Vasileiadis, N. Aspiotis, D. Alexandropoulos, A. Meristoudi, V. Karoutsos and E. Sarantopoulou, *J. Opt.* **12**, 124015 (2010).
8. "Porphyrin counter anion in imidazolium-modified graphene-oxide", N. Karousis, S.P. Economopoulos, E. Sarantopoulou and N. Tagmatarchis, *Carbon* **48**, 854 (2010).
9. "Determination of oxygen content in pulsed laser deposited InN thin films with analytical electron microscopy", G. Dražić, E. Sarantopoulou, Z. Kollia, A.C. Cefalas

and S. Kobe, *Microsc. Microanal.* **15**, 1316 (2009).

10. “Surface modification of polyhedral oligomeric silsesquioxane block copolymer films by 157 nm laser light”, E. Sarantopoulou, Z. Kollia, A. C. Cefalas, A. E. Siokou, P. Argitis, V. Bellas, and S. Kobe *J. Appl. Phys.* **105**, 114305 (2009).

11. “Dual purpose laser ablation-inductively coupled plasma mass spectrometry for pulsed laser deposition and diagnostics of thin film fabrication: Preliminary study”, M. Janeva Azdejkovic, J. T van Elterena, K. Zuzek Rozman, R. Jacimovic, E. Sarantopoulou, S. Kobe and A. C. Cefalas, *Talanta* **79**, 583 (2009).

12. “Observation of nano-structured cluster formation of Tm ions in CaF₂ crystals”, G. Drazic, S. Kobe, A. C. Cefalas, E. Sarantopoulou and Z. Kollia, *Mater. Sci. Eng. B* **152**, 119 (2008).

13. “Self-assembled ferromagnetic and superparamagnetic structures of Fe block copolymers hybrids”, E. Sarantopoulou, J. Kovač, S. Pispas, S. Kobe, Z. Kollia and A.C. Cefalas, *Superlatt. Microstruct.* **44**, 457 (2008).

14. “Surface nano/micro functionalization of PMMA thin films by 157 nm irradiation for sensing applications”, E. Sarantopoulou, Z. Kollia, A.C. Cefalas, K. Manoli, M. Sanopoulou, D. Goustouridis, S. Chatzandroulis and I. Raptis, *Appl. Surf. Sci.* **254**, 1710 (2008).

15. “Growth and adhesion of biphasic crystalline–amorphous Sm/Fe–Ta–N nanospheroids on a Ta surface”, A.C. Cefalas, J. Kovac, E. Sarantopoulou, G. Drazic, Z. Kollia and S. Kobe, *Surf. Interface Anal.* **40**, 364 (2008).

16. “Growth, clustering and morphology of intermetallic alloy core-shell nanodroplets”, A.C. Cefalas, S. Kobe, E. Sarantopoulou, Z. Samardžija, M. Janeva, G. Drazic, and Z. Kollia, *Phys. Status Solidi (A)* **205**, 1465 (2008).

17. "Dynamics and Laser Processing of Functional Fluoride Organic Surfaces at VUV wavelengths", E. Sarantopoulou, Z. Kollia, M. Chatzichristidi, A. Douvas, P. Argitis, S. Kobe and A.C. Cefalas, *J. Laser Micro/Nanoeng.* **3**, 24 (2008).
18. "Surface modification of polymeric thin films with vacuum ultraviolet light", E. Sarantopoulou, J. Kovač, Z.Kollia, I. Raptis, S. Kobe and A.C. Cefalas, *Surf. Interface Anal.* **40**, 400 (2008).
19. "Analytical electron microscopy of InN thin films prepared by pulsed laser deposition", G. Drazic, E. Sarantopoulou, Z. Kollia, A.C. Cefalas and S. Kobe, *Microsc. Microanal.* **14**, 254 (2008).
20. "Nanocrystallization of CaCO₃ at solid/liquid interfaces in magnetic field: A quantum approach", A.C. Cefalas, S. Kobe, G. Dražić, E. Sarantopoulou, Z. Kollia, J. Stražišar and A. Meden. *Appl. Surf. Sci.* **254**, 6715 (2008).
21. "Nano-modification of surface morphology of Teflon AF with VUV laser light", E. Sarantopoulou, *Phys. Status Solidi (A)* **204**, 1843 (2007).
22. "Micro/nano self-assembled 2D structures of block copolymer/Fe hybrids", E. Sarantopoulou, K. Gatsouli, Z. Kollia, S. Pispas, S. Kobe, and J. Kovač, *Phys. Status Solidi (A)* **204**, 1835 (2007).
23. "Self-assembly in mixed aqueous solutions of amphiphilic block copolymers and vesicle forming surfactant" S. Pispas, E. Sarantopoulou, *Langmuir* **23**, 7484 (2007).
24. "Light induced adsorption of Si nano-composites in LiF crystals at 157 nm", E. Sarantopoulou, Z. Kollia, A.C. Cefalas and S. Kobe, *Appl. Surf. Sci.* **253**, 4438 (2007).
25. "Growth of crystalline/amorphous biphasic Sm-Fe-Ta-N magnetic nanodroplets", S. Kobe, E. Sarantopoulou, G. Drazic, J. Kovac, M. Janeva, Z. Kollia and A. C. Cefalas, *Appl. Surf. Sci.* **254**, 1027 (2007).

26. "Nano-scale spatial control over surface morphology of biocompatible fluoropolymers at 157 nm", E. Sarantopoulou, Z. Kollia, A.C. Cefalas, A. M. Douvas, M. Chatzichristidi, P. Argitis and S. Kobe, *Mater. Sci. Eng. C* **27**, 1191 (2007).
27. "Polymer self-assembled nano-structure and surface relief gratings induced with laser at 157nm", E. Sarantopoulou, Z. Kollia, A. C. Cefalas, A. M. Douvas, M. Chatzichristidi, P. Argitis and S. Kobe, *Appl. Surf. Sci.* **253**, 7884 (2007).
28. "VUV light induced surface interaction and accelerated diffusion of carbon, silicon, oxygen and other composites in LiF crystals", E. Sarantopoulou, C.P.E. Varsamis, Z. Kollia, A.C. Cefalas, J. Kovac and S. Kobe *Appl. Surf. Sci.* **254**, 804 (2007).
29. "Enhancement of Sensing Properties of Thin Poly(Methyl Methacrylate) Films by VUV Modification", I. Raptis, J. Kovač, M. Chatzichristidi, E. Sarantopoulou, Z. Kollia, S. Kobe and A. C. Cefalas, *J. Laser Micro/Nanoeng.* **2**, 200 (2007).
30. "Preparation of ultra-thin films of DNA bases with laser light at 157 nm", E. Sarantopoulou, Z. Kollia, A. C. Cefalas, Z. Samardzija and S. Kobe, *Thin Solid Films* **495**, 45 (2006).
31. "Preventing biological activity of *Ulocladium* sp spores in artifacts using 157-nm laser", E. Sarantopoulou, Z. Kollia and I. Gomoiu, *Appl. Phys. A* **83**, 663 (2006).
32. "Nanocrystalline Sm-Fe composites fabricated by pulse laser deposition at 157 nm", S. Kobe, K. Zuzek, E. Sarantopoulou, Z. Samardzija, Z. Kollia and A.C. Cefalas, *Appl. Surf. Sci.* **248**, 349 (2005).
33. "Self assembled structures on fluoro-polymers induced with laser light at 157 nm", Z. Kollia, E. Sarantopoulou, A.C. Cefalas, S. Kobe, P. Argitis and K. Missiakos, *Appl. Surf. Sci.* **248**, 248 (2005).

34. "157-nm laser ablation of polymeric layers for fabrication of biomolecule microarrays", A.M. Douvas, P.S. Petrou, S.E. Kakabakos, K. Missiakos, P. Argitis, E. Sarantopoulou, Z. Kollia and A.C. Cefalas, *Anal. Bioanal. Chem.* **381**, 1027 (2005).
35. "Nanometric size control and treatment of historic paper manuscript and prints with laser light at 157 nm", Z. Kollia, E. Sarantopoulou, A. C. Cefalas, S. Kobe and Z. Samardzija, *Appl. Phys. A* **79**, 379 (2004).
36. "Fabrication of Magnetic SmFe Films by Pulsed Laser Deposition at 157 nm", E. Sarantopoulou, S. Kobe, K. Zuzek, Z. Kollia, G. Drazic and A. C. Cefalas, *IEEE Trans. Magn.* **40**, 2943 (2004).
37. "Observation of cluster formation of rare earth ions in wide band gap fluorine dielectric crystals using transmission electron microscopy", G. Drazic, S. Kobe, E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Appl. Surf. Sci.* **226**, 120 (2004).
38. "Nanostructured imaging of biological specimens in vivo with laser plasma X-ray contact microscopy.", A.C. Cefalas, E. Sarantopoulou, Z. Kollia, P. Argitis, E. Tegou, T.W. Ford, A.D. Stead, C. N. Danson, D. Neely and S. Kobe, *Mater. Sci. Eng. C* **23**, 105 (2003).
39. "Magnetic moment of the $4f_8$ and $4f_75d$ electronic configurations of Tb_{3+} ions in wide band gap fluoride dielectric crystals", E. Sarantopoulou, S. Kobe, Z. Kollia, P. Mc Guinness and A. C. Cefalas, *IEEE Trans. Magn.* **39**, 3426 (2003).
40. "Magnetic and optical properties of single $4f_n$ and mixed $4f_{n-1}5d$ electronic configurations of trivalent rare earth ions in wide band gap dielectric crystals", E. Sarantopoulou, S. Kobe, Z. Kollia B. Podmiljsak, P. J. McGuinness, G. Drazic and A. C. Cefalas, *J. Magn. Mater.* **267**, 182 (2003).
41. "Control over nano-crystallization symmetry in turbulent flow in the presence of magnetic fields", S. Kobe, G. Drazic, E. Sarantopoulou and A. C. Cefalas, *Mater. Sci. Eng. C* **23**, 811 (2003).

42. "Photodissociation dynamics of DNA bases", E. Sarantopoulou, Z. Kollia, A. C. Cefalas, S. Kobe and Z. Samardzija, *J. Biol. Phys.* **29**, 149 (2003).
43. "The challenges of 157-nm lithography", E. Sarantopoulou, Z. Kollia, A.C. Cefalas, E. Gogolides, P. Argitis, S. Kobe and G. Drazic, *Mater. Sci. Eng. C.* **23**, 995 (2003).
44. "Removing Foxing stains from old paper at 157 nm", E. Sarantopoulou, Z. Samardzija, S. Kobe, Z. Kollia and A. C. Cefalas, *Appl. Surf. Sci.* **208/209**, 311 (2003).
45. "He₂ 60-90nm photon source for investigating photodissociation dynamics of potential X-UV resists.", A. C. Cefalas, E. Sarantopoulou, P. Argitis and E. Gogolides, *Microelectron. Eng.* **61/62**, 157 (2002).
46. "Vacuum Ultraviolet and Ultraviolet Emission Bands of LiLuF₄:Tb³⁺ crystals in the spectral range from 157 to 200nm", E. Sarantopoulou, Z. Kollia and A. C. Cefalas. *Microelectron Eng.* **61-62**, 133 (2002).
47. "Crystal field splitting of the 4f⁵d electronic configuration of Pr³⁺ ions in wide band gap fluoride dielectric crystals", E. Sarantopoulou, Z. Kollia, A. C. Cefalas, V. V. Semashko, R. Yu. Abdulsabirov, A.K. Naumov, S. L. Korableva, T. Szczurek, S. Kobe and P. J. McGuinness, *Opt. Commun.* **208**, 345 (2002).
48. "Crystal field splitting of highly excited electronic states of the 4f_{n-1}5d electronic configuration of trivalent rare earth ions in wide band gap crystals", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Cryst. Eng.* **5**, 203 (2002).
49. "Nucleation and Crystallization of CaCO₃ in Applied magnetic fields", S. Kobe, G. Drazic, M. Komelj, E. Sarantopoulou and A. C. Cefalas, *Cryst. Eng.* **5**, 243 (2002).
50. "A non-destructive determination of rare earth ion concentration in laser crystals using the vibrating sample magnetometer method", S. Kobe, P. Polmijak, P.J.

McGuinness, E. Sarantopoulou, Z. Kollia, A. Vourdas and A. C. Cefalas, *Cryst. Eng.* **5**, 307 (2002).

51. "X-ray microanalysis of optical materials for 157nm photolithography", G. Drazic, E. Sarantopoulou, S. Kobe, Z. Kollia, P. Argitis and A. C. Cefalas, *Cryst. Eng.* **5**, 327 (2002).

52. "Evaluation of Siloxane and polyhedral sisesquioxane copolymers for 157nm lithography", V. Bellas, E. Tegou, E. Gogolides, P. Argitis, H. Iatrou, N. Hatzichristides, E. Sarantopoulou and A. C. Cefalas, *Journ. Vac. Soc. Am. B* **20**, 2902 (2002).

53. "Temperature and pressure dependence of Raman-active phonons of CaMoO₄: an anharmonicity study", E. Sarantopoulou, C. Raptis, S. Ves, D. Christofilos, and G. A.Kourouklis, *J. Phys: Condens. Matter* **14**, 8925 (2002).

54. "YF:Nd³⁺, Pr³⁺, Gd³⁺ wide band gap crystals as optical material for 157 nm photolithography", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Opt. Mater.* **18**, 23 (2001).

55. "Modulation of period of quantum beats from optical emissions from the excited electronic states of mercury triatomic clusters", E. Sarantopoulou, C. Skordoulis, A. C. Cefalas, and A. Vourdas, *Synth. Met.* **124**, 267 (2001).

56. "Vortex interference in Josephson Arrays in the insulating phase", A. Vourdas, A. C. Cefalas and E. Sarantopoulou, *Synth. Met.* **124**, 265 (2001).

57. "Photoresist materials for 157nm photolithography", E. Sarantopoulou, A. C. Cefalas, P.Argitis and E. Gogolides, *Mater. Sci. Eng. C* **15**, 159 (2001).

58. "Efficient removal of foxing from a medieval Ptolemaic map using a molecular laser at 157nm", A. C. Cefalas, E. Sarantopoulou and Z. Kollia, *Appl. Phys. A* **73**, 571 (2001).

59. "Intense Vacuum Ultraviolet emission at 172nm from LaF₃: Nd₃₊ crystals", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Microelectron Eng.* **57**, 93 (2001).
60. "Research on Optical Polymeric and Molecular Materials assisted by VUV Light at the NHRF", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Lamda Physik Highlights* **58**, 6 (2001).
61. "Wide band gap fluoride dielectric crystals doped with trivalent rare earth ions as optical materials for 157 nm photolithography", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Microelectron Eng.* **53**, 105 (2000).
62. "157 nm photodissociation of polyamides", A. C. Cefalas and E. Sarantopoulou, *Microelectron Eng.* **53**, 465 (2000).
63. "Absorbance and outgasing of photoresist polymeric materials for UV lithography below 193 nm including 157 nm lithography", A. C. Cefalas, E. Sarantopoulou, E. Gogolides and P.Argitis, *Microelectron Eng.* **53**, 123 (2000).
64. "LiCaAlF₆:Nd₃₊ crystal as optical material for 157nm photolithography", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Opt. Commun.* **177**, 377 (2000).
65. "Pressure and Temperature dependent Raman Study of ZnWO₄", A. Perakis, E. Sarantopoulou and C. Raptis, *High Pressure Research* **18**, 181 (2000).
66. "Phonon deformation potentials of CdTe" V.C. Stergiou, E. Sarantopoulou, Y.S. Raptis, E. Anastassakis, N.T. Pelekanos, A. Arnoult, S. Tatarenko and K. Saminadayar, *High Pressure Research* **18**, 101 (2000).
67. "On the origin of the Boson peak in the Raman spectra of glasses", VK Tikhomirov, A. Perakis, E. Sarantopoulou and A.B. Seddon, *Asian J. Phys* **9**, 551 (2000).

68. "Mass spectroscopic studies and ablation characteristics of Nylon 6.6 at 248 nm", A. C. Cefalas, N. Vassilopoulos, Z. Kollia, E. Sarantopoulou, and C. Skordoulis, *Appl. Phys. A* **70**, 21 (2000).
69. "Temperature dependence of Raman scattering and anharmonicity study of MgF_2 ", A. Perakis, E. Sarantopoulou, Y.S. Raptis and C. Raptis *Phys. Rev. B.* **59**, 775 (1999).
70. "Vacuum Ultraviolet $4f_{5d} \rightarrow 4f_{10}$ interconfigurational transitions of Ho^{3+} ions in LiLuF_4 single crystals", A.C. Cefalas, Z. Kollia, E. Sarantopoulou, *J. Opt. Soc. Am. B: Opt. Phys.* **16**, 625, (1999).
71. " $4f_{5d} \rightarrow 4f_{10}$ spin-allowed and spin-forbidden transitions of Ho^{3+} ions in LiYF_4 single crystals in the vacuum ultraviolet", E. Sarantopoulou, Z. Kollia and A. C. Cefalas, *Opt. Commun.* **169**, 263 (1999).
72. "Mass spectroscopic and degassing characteristics of polymeric materials for 157 nm photolithography.", C. Cefalas, E. Sarantopoulou, P. Argitis, and E. Sarantopoulou, *Appl. Phys. A* **69**, 5929 (1999).
73. "An interpretation of the Boson peak in rare earth ion doped glasses", V.K. Tikhomirov, Ajha, A. Perakis, E. Sarantopoulou, M. Naftaly, V. Krasteva, R. Li, A.B. Seddon, *J. Non- Cryst. Solids* **256**, 89, (1999).
74. "On the scattering mechanisms responsible for the boson peak in glasses", VK Tikhomirov, E. Sarantopoulou, A. Perakis and C. Raptis, *Solid State Commun.* **109**, 433 (1999).
75. "Pressure and temperature-dependent Raman study of YLiF_4 ", E. Sarantopoulou, Y. S. Raptis, E. Zouboulis, and C. Raptis, *Phys. Rev. B* **59**, 4154 (1999).
76. "Laser plasma X-ray contact microscopy of living specimens using a chemically amplified epoxy resist", A. C. Cefalas, P. Argitis, Z. Kollia, E. Sarantopoulou, T. W.

Ford, A. D. Stead, A. Maranka, C. N. Danson, J. Knott and D. Neely, *Appl. Phys. Lett.* **72**, 3258 (1998).

77. "On the $4f^3 \rightarrow 4f25d$ interconfigurational transitions of Nd^{3+} ions in K_2YF_5 and $LiYF_4$ crystal hosts", Z. Kollia, E. Sarantopoulou, A. C. Cefalas, R. Yu. Abdulsabirov, S. L. Korableva, A. K. Naumov and V. V. Semashko, *Opt. Commun.* **149**, 386 (1998).

78. "On the electron $4f^7(8S)5d$ -phonon interaction of the Tb^{3+} ions in $LiLuF_4$ single crystal hosts", E. Sarantopoulou, Z. Kollia, A.C. Cefalas, V. V. Semashko, R. Yu, Abdulsabirov, A. K. Naumov and S. L. Korableva, *Opt. Commun.* **156**, 101 (1998).

79. "Vacuum-ultraviolet interconfigurational $4f^3 \rightarrow 4f25d$ absorption and emission studies of the Nd^{3+} ion in KYF , YF , and YLF crystal hosts", Z. Kollia, E. Sarantopoulou, A. C. Cefalas, C. A. Nicolaides, A. K. Naumov, V. V. Semashko, R. Y. Abdulsabirov, S. L. Korableva and M. A. Dubinskii, *J. Opt. Soc. Am. B: Opt. Phys.* **12**, 782 (1995).

80. "VUV and UV fluorescence and absorption studies of Nd^{3+} and Ho^{3+} ions in $LiYF_4$ single crystals", E. Sarantopoulou, A. C. Cefalas, M. A. Dubinskii, C. A. Nicolaides, R. Y. Abdulsabirov, S. L. Korableva, A. K. Naumov and V. V. Semashko, *Opt. Commun.* **107**, 104 (1994).

81. "VUV and UV fluorescence and absorption studies of Pr^{3+} -doped $LiLuF_4$ single crystals", E. Sarantopoulou, A. C. Cefalas, M. A. Dubinskii, C. A. Nicolaides, R. Y. Abdulsabirov, S. L. Korableva, A. K. Naumov, V. V. Semashko, *Opt. Lett.* **19**, 499 (1994).

82. "Vacuum ultraviolet and ultraviolet fluorescence and absorption studies of Er^{3+} -doped $LiLuF_4$ single crystals", E. Sarantopoulou, Z. Kollia, A. C. Cefalas, Dubinskii, C. A. Nicolaides, R. Y. Abdulsabirov, S. L. Korableva, A. K. Naumov and V. V. Semashko, *Appl. Phys. Lett.* **65**, 813 (1994).

83. "VUV and UV fluorescence and absorption studies of Tb³⁺ and Tm³⁺ trivalent ions in LiYF₄ single crystal hosts", E. Sarantopoulou, A. C. Cefalas, M. A. Dubinskii, Z. Kollia, C. A. Nicolaidis, R. Y. Abdulsabirov, S. L. Korableva, A. K. Naumov and V. V. Semashko, *J. Mod. Opt.* **41**, 767 (1994).
84. "VUV and UV fluorescence and absorption studies of Pr³⁺-doped LiLuF₄ single crystals", V.V. Semashko, A.K. Naumov, S.L. Korableva, R. Yu. Abdulsabirov, C.A. Nicolaidis, M.A. Dubinskii, A.C. Cefalas, E. Sarantopoulou, *Philips J. Res.* **48**, 499 (1994).
85. "On the development of new VUV and UV solid state laser sources for photochemical applications", A. C. Cefalas, M. A. Dubinskii, E. Sarantopoulou, R. Y. Abdulsabirov, S. L. Korableva, A. K. Naumov, V. V. Semashko, C. A. Nicolaidis, *Laser Chem.* **13**, 143 (1993).
86. "Efficient doped LaF₃:Nd³⁺ based vacuum-ultraviolet laser at 172 nm", M.A. Dubinskii, A. C. Cefalas, E. Sarantopoulou, S. M. Spyrou, C. A. Nicolaidis, R. Y. Abdulsabirov, S. L. Korableva and V. V. Semashko, *J. Opt. Soc. Am. B: Opt. Phys.* **9**, 1148 (1992).
87. "On the inter-configurational 4f²5d-4f³ VUV and UV fluorescence features of Nd³⁺ in YLF single crystals under fluorine laser pumping", M. A. Dubinskii, A. C. Cefalas, E. Sarantopoulou, R. Y. Abdulsabirov, S. L. Korableva, A. K. Naumov, V. V. Semashko, *Opt. Commun.* **94**, 115 (1992).
88. "Laser induced fluorescence (LIF) of mercury dimer and trimer via dissociation of HgBr₂ at 157 nm", C. Skordoulis, E. Sarantopoulou, S. M. Spyrou, C. Kosmidis and A. C. Cefalas, *Z. Phys. D: At., Mol. Clusters* **18**, 175 (1991).
89. "Observation of vibronic-electronic interaction (Renner - Teller Effect) in mercury triatomic clusters via real time quantum beats", A. C. Cefalas, S. M. Spyrou and E. Sarantopoulou, *Laser Ultra fast Processes* **4**, 175 (1991).

90. "Amplification characteristics of a discharge excited fluorine laser", C. Skordoulis, E. Sarantopoulou, S. M. Spyrou and A. C. Cefalas, *J. Mod. Opt.* **37**, 501 (1990).

E. PAPERS IN PROCEEDINGS OF INTERNATIONAL CONFERENCES

1. "Structural and compositional properties of Sm-Fe-Ta magnetic nanospheres prepared by pulsed-laser depositing at 157 nm in a N₂ atmosphere." S. Šturm, K. Zuzek Roman, E. Sarantopoulou and S. Kobe, *Proc. 14th European Microscopy Congress*, 1-5 September 2008, Aachen, Germany. *EMC 2008. Berlin; Heidelberg V*: S. Richter, A. Schwedt (ed.), Springer, 2008, pp.627-628.

2. "Growth and survival of coloured fungi in space", G. Ioana, P. Marius, H. Dumitru and E. Sarantopoulou, *Inter. J. Astrobiology* **7** (1) 2008, pp. 85-86.

3. "Analytical electron microscopy of Ti-Zr-Ni based quasi-crystals prepared with meltspinning and pulsed laser deposition." G. Drazic, A. Kocjan, P.J. McGuinness, E. Sarantopoulou, Z. Kollia, A.C. Cefalas and S. Kobe, *20th Australian Conference on Microscopy and Microanalysis and 4th Congress of the International Union of Microbeam Analysis Societies*, Perth, Western Australia 10 - 15 February 2008 V: B. J.Griffin (ed.). Parkville: Australian Microscopy and Microanalysis Society, 2008, pp. 421-422.

4. "The development of a magnetic anti-scaling treatment and its influence on the crystal phase of CaCO₃ produced - industrial applications." S. Kobe, A.C. Cefalas, G. Drazic, E. Sarantopoulou, Z. Kollia, J. Strazisar, A. Meden, and M. V. Novak, *Proc. of 20th International Workshop on Rare Earth Permanent Magnet & their Applications*, September 8-10, Knossos, Crete, D. Niarchos (ed), 2008, pp. 178-182.

5. "Modification of sensing properties of thin polymer films by VUV irradiation." E. Sarantopoulou, Z. Kollia, K. Manoli, M. Sanopoulou, D. Goustouridis, S. Chatzandroulis and I. Raptis, *4th International Conference on Solid-State Sensors*,

Actuators and Microsystems, Transducers and Eurosensors '07 art. no. 4300199, 2007, pp. 591-594.

6. "VUV laser fabrication of Fe-Sm-Ta-N magnetic nanodroplets." S. Kobe, E. Sarantopoulou, Z. Samardzija, M. Janeva, Z. Kollia and A. C. Cefalas, *Proc. 8th Inter. Symposium on Laser Precision Microfabrication*, Vienna Austria 24-27 April, 2007, pp.56.

7. "Analytical electron microscopy of Tm clusters in optical grade CaF₂", G. Drazic, S. Kobe, E. Sarantopoulou and A.C. Cefalas, *Proc. 39th Int. Conf. on Microelectronics, Devices and Materials and the Workshop on Embedded Systems*, Oct. 1-3, 2003. Ptuj Slovenia, G. Pignatell and A. Zemva, I.Sorli, (eds.) Ljubljana (MIDEM-Society for Microelectronics, Electronic Components and Materials) 2003, pp. 393-398.

8. "VUV spectroscopy of nominally pure and rare-earth ions doped LiCaAlF₆ single crystals as promising materials for 157 nm photolithography." A.C. Cefalas, E. Sarantopoulou, Z. Kolia, R. Y. Abdulsabirov, S. Korableva, A. K. Naumov, V. Semashko, S. Kobe and P. J. Mc Guinness. *Proc XI Feofilov Symposium on Spectroscopy of Crystals Activated by Rare-Earth and Transition Metal Ions*. Kazan Sept. 2001, A. A Kaplyanskii, B. Z. Malkin, S. I. Nikitin (eds.), SPIE V4766, 2002, pp.171-178.

9. "Magnetic moment of trivalent rare earth ions in ionic laser crystals." S. Kobe, B. Podmiljsak, P.J. McGuinness, G. Drazic, E. Sarantopoulou, Z. Kollia and A. C. Cefalas. *Proc 17th International Workshop on Rare Earth Magnets and their application* August 18-22, Newark Delaware USA, G. C. Hadjipanayis and M. J. Bonder (ed), 2002, pp. 228- 235.

10. "Resists for 157nm lithography." E. Sarantopoulou, Z. Kollia and A. C. Cefalas, P.Argitis and E. Gogolides. *Proc. of the International conference on "Lasers 2001"*, 3-7 December 2001, Tucson Arizona, USA, 2002, pp. 252-257.

11. "Restoration of historic paper using vacuum ultraviolet lasers". E. Sarantopoulou, Z. Kollia and A. C. Cefalas. *Proc. of the international conference on "Lasers 2001"*, 3-7 December 2001, Tucson Arizona, USA, 2002, pp. 288-293.
12. "Removing foxing stains from old paper at 157nm." A.C. Cefalas, E. Sarantopoulou, Z. Kollia, P. Argitis. *Proc. of Laser Techniques and Systems in art Preservation*, COLA Munich Germany 18-22 June 2001. R. Salibeni (ed.), SPIE V4402, 2001, pp.139-144.
13. "F₂ laser (157 nm) lithography: materials and processes." E. Tegou, E. Gogolides, P. Argitis, C. D. Diakoumakos, A. Tserepi, A. C. Cefalas, E. Sarantopoulou, J. Cashmore and P. Grunewald, *Proc. of Microelectronics Microsystems and Nanofabrication (MMN)*, 20-22 November 2000, Athens, A. D. Nassiopoulou, X. Zianni, (eds) World Scientific 2001, pp. 127-130.
14. "Single shot, laser plasma X-ray contact microscopy of Chlamydomonas." A. C. Cefalas, P. Argitis, Z. Kollia, E. Sarantopoulou, T. W. Ford, A. D. Stead, A. Maranka, C. N. Danson, J. Knott and D. Neely, *5th International Conference and Euroconference on Optics Within Life Sciences*, 13-16 Oct. 1998, Heraklion-Greece, C. Fotakis, C. Kalpouzou, and T. Papazoglou (eds), Springer Verlag series in Optics within Life Sciences, 2000, pp.277-280.
15. "Laser ablation of nylon 66 under UV irradiation at 193 and 248 nm." A.C. Cefalas, N. Vasilopoulos, Z. Kollia, E. Sarantopoulou, C. Skordoulis, T. Argitis, *10th International School on Quantum Electronics: Lasers Physics and Applications*, Varna- Bulgaria, 21-25 Sept. 1998, P. A. Atanasov and D. V. Stoyanov (eds), SPIE-Int. Soc. Opt. Eng. V. 3571, 1999, pp.328-332.
16. "Laser Plasma X-Ray contact Microscopy of living specimens." A. C. Cefalas, T. Argitis, Z. Kollia, E. Sarantopoulou, T. Ford, T. Stead, A. Maranca C. Danson, J. Knott and D. Neely, *10th International School on Quantum Electronics, Lasers Physics and Applications*, Varna Bulgaria, 21-25 Sept. 1998, P. A. Atanasov, D. V. Stoyanov (eds), SPIE-Int. Soc. Opt. Eng. V. 3571, 1999, pp. 388-391.

17. "On the $4f_95d \rightarrow 4f_{10}$ transitions of Ho^{3+} ions in LiYF_4 single crystals." A.C. Cefalas, E. Sarantopoulou and Z. Kollia, *10th International School on Quantum Electronics, Lasers Physics and Applications*, Varna Bulgaria, 21-25 Sept. 1998, P. A. Atanasov and D. V. Stoyanov (eds), SPIE-Int. Soc. Opt. Eng. V. 3571, 1999, pp. 185-189.
18. "Fast high resolution negative chemically amplified epoxy photoresist for X-Ray imaging of living biological specimens in the water window." A. C. Cefalas, P. Argitis, E. Sarantopoulou, T. W. Ford, A. D. Stead, A. Maranka, C. N. Danson, J. Knott and D. Neely, *International Conference on Lasers 98*, 7-11 Dec. 1998, Tucson, Arizona USA, V. J. Corcoran and T. A. Goldman (eds), STS press, Mc Lean, 1999, pp. 649- 652.
19. "Absorbance and Outgasing of Photoresist Polymeric Materials and Nylon 6.6 for 157 nm Lithography." A.C. Cefalas, E. Sarantopoulou, E. Gogolides and P. Argitis, *Interface '99* 14-16 November 1999, San Diego, California, USA, 1999, pp. 197-205.
20. "Optical materials for 157nm photolithography." A. C. Cefalas and E. Sarantopoulou, *Interactive 99*, San Diego California, USA, 14-16 November 1999, pp.1-4.
21. "On the $4f_25d \rightarrow 4f_3$ interconfigurational transitions of Nd^{3+} ions in LiCaAlF_6 single crystal." Z. Kollia, E. Sarantopoulou, and A. C. Cefalas, *2nd International Conference on New Laser Technologies and Applications*, 1-4 June 1997, Olympia-Greece, A. Carabelas, P. Di Lazzaro, A. Torre, G. Baldacchini (eds), SPIE-Int. Soc. Opt. Eng. V. 3423, 1998, pp. 242-246.
22. "Single pulse, high resolution X-ray contact microscopy with an advanced epoxy novolac resist." P. Argitis, A. C. Cefalas, Z. Kollia, E. Sarantopoulou, T. Ford, T. Stead, A. Maranka, C. N. Danson, J. Knott and D. Neely, *2nd International Conference on New Laser Technologies and Applications*, 1-4 June 1997, Olympia-Greece, A. Carabelas, P. Di Lazzaro, A. Torre, G. Baldachini (eds), SPIE-Int. Soc. Opt. Eng. V. 3423, 1998, pp. 411-415.

23. "The excited state absorption from the 5d - states of Ce³⁺ ions in LiCaAlF₆ crystals." V. V. Semashko, R.Yu Abdulsabirov, S. L. Korableva, A. K. Naumov, B. M. Galjautdinov, A. C. Cefalas, Z. Kollia and E. Sarantopoulou, *International Conference on Photonic Echo and Coherent Spectroscopy*, Russia 1997, V. Samartsev (ed.), SPIE-Int. Soc. Opt. Eng. V. 3239, 1998, pp. 240-244.

24. "4f₂5d → 4f₃ interconfigurational transitions of the Nd³⁺ ions in K₂YF₅ crystal host." Z. Kollia, E. Sarantopoulou and A. C. Cefalas, *9th International School on Quantum Electronics: Lasers-Physics and Applications*, 16-20 Sept. 1996, Varna-Bulgaria, P. A. Atanasov (ed.) SPIE-Int. Soc. Opt. Eng. V. 3052, 1996, pp.235-240.