TPCI (ΙΘΦΧ) 2001

1. Papers in Refereed Journals

1. "Potential energy curves and dipole transition moments for electronic states of ArHe and HeNe",
I.D. Petsalakis, G. Theodorakopoulos, H.- P. Liebermann and R.J. Buenker,
J. Chem. Phys. 115, 6365 (2001).

2. "The Rydberg states of NO_2: Vibrational autoionization of the nd sigma states",
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J. Chem. Phys. 115, 10394 (2001).

3. "Conditions conducive to the chemi-ionization reaction $O(^3P) + CH(X^2\Pi, a^4\Sigma^-) \rightarrow HCO^+(X^1\Sigma^+) + e^-$",
A. Metropoulos and A. Mavridis,
J. Chem. Phys. 115, 6946 (2001).

4. "He in two color ac-fields of λ_1=248 nm and λ_2=(1/m)248 nm, m=2,3,4. The rate of multiphoton ionization, for weak fields, is a simple function of the phase",
Th. Mercouris and C.A. Nicolaides,
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5. "The multiphoton ionization rate and the energy shift of atoms interacting with weak dichromatic fields with commensurate frequencies are simple functions of the phase difference",
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Eur. Phys. J. D 14, 241 (2001).

6. "Theory and computation of the rate of multiphoton two-electron ionization via the direct mechanism",
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J. Phys. B 34, 3789 (2001).

7. "Existence and characterization of n=3 triply excited resonances of He^-",
C.A. Nicolaides and N.A. Piangos,
J. Phys. B 34, 99 (2001).

8. "Complex energies and the polyelectronic Stark problem: II. The Li n = 4 levels for weak and strong fields",
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9. "State-specific approach and computation of resonance states. Identification and properties of the lowest $^2P^o$ and ^2D triply excited states of He^-",
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10. "Nonhyperbolic escape and changes in phase space stability structures in laser-induced multiphoton dissociation of a diatomic molecule",
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11. "Weakly bound resonances: Electronic structure and partial decay widths of a new He^- triply excited resonance",
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12. "Multiphoton detachment rates of H^- for weak and strong fields",
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13. "He in dichromatic weak or strong ac-fields of λ_1 =248 nm and λ_2=(1/m) 248 nm, m=2,3,4",
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15. "Transferable tight binding parameters for paramagnetic and ferromagnetic iron",
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Physica B 296, 125 (2001).

16. "Applications of the NRL-tight binding method to magnetic systems",
M.J. Mehl, D.A. Papaconstantopoulos, I.I. Mazin, N.C. Bacalis and W.E. Pickett,
J. Appl. Phys. 89, 6880 (2001).

17. "Electronic apex locators: operation principles and clinical considerations"
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18. "Equilibrium structures of the N=64 water cluster in the presence of external electric fields",
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19. "A molecular dynamics study of structural transitions in small water clusters in the presence of an external electric field ",
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20. "Excitonic bands in the photoconductivity spectra of some organic-inorganic hybrid compounds based on metal halide units" (invited paper),
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21. "Excitonic bands in the spectra of some organic-inorganic hybrid compounds based on metal halide units",
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22. "Preparation, structure and physical properties of some new organic conductors of τ-phase",
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Synth. Met. 120, 743 (2001).

23. "Low temperature electric nature of τ-phase contuctors",
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Z. Naturforsch. B 56, 213 (2001).

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Z. Naturforsch. B 56, 963 (2001).

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34. "A molecular dynamics study of Li-doped borate glasses",
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35. "Modelling of the stress-transfer efficiency of carbon-epoxy interfaces",
A. Paipetis, C. Galiotis,
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36. "Density of alkali germanate glasses related to structure",
Y.D. Yiannopoulos, C.P.E. Varsamis and E.I. Kamitsos,
J. Non-Cryst. Solids 293-295, 244 (2001).

37. "Spectroscopic studies of bulk As_2S_3 glasses and amorphous films doped with Dy, Sm and Mn",
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38. "Structure and properties of alkaline earth borate glasses",
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41. "YF_3:Nd^{3+}, Pr^{3+}, Gd^{3+} wide band gap crystals as optical material for 157 nm photolithography",
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42. "Vortex interference in Josephson arrays in the insulating phase",
A. Vourdas, A.C. Cefalas and E. Sarantopoulou,
Synth. Met. 124, 265 (2001).

43. "Modulation of period of quantum beats from optical emissions from the excited electronic states of mercury triatomic clusters",
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44. "Photoresistive materials for 157 nm photolithography",
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45. "Efficient removal of foxing from a medieval Ptolemaic map using a molecular fluorine laser at 157 nm",
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Microelectron. Eng. 57-58, 93 (2001).

47. "Experimental and theoretical analysis of the 5pnp J= 0^e,1^e, 2^e autoionizing spectrum of Sr",
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48. "Effects of experimental parameters in quantitative analysis of steel alloy by laser-induced breakdown spectroscopy",
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2. Papers in Proceedings of International and National Conferences

1. "Aspects of the theory and computation of field-free and field-dressed resonance states in atomic physics",
C.A. Nicolaides,
Proc. of the conference on "Rigged Hilbert spaces and time-asymmetric quantum mechanics" Jaca, Spain, May 2001 (invited paper) (2001).

2. "From Hermitian to energy-and time-asymmetric treatment of resonance states"

C.A. Nicolaides,
Proc. of the 22nd Solvay conference, Delphi, November (invited paper) (2001).

3. "Spectroscopic studies of mobile cations in glass",
E.I. Kamitsos, C.P.E. Varsamis and A. Vegiri,
Proc. Int. Congr. Glass, Edinburgh, Scotland, 2001, vol. 1, pp. 234-246 (invited paper).

4. "Use of FT-NIR spectroscopy for on-line monitoring of formaldehyde-based resin synthesis",
E. Dessipri, E. Minopoulou, G.D. Chryssikos, V. Gionis and A. Paipetis,
Proc. of 5th European Panel Products Symposium, Llandudno, Wales, 2001, pp.15-26.

5. "Structure-property relationships in the glassy state",
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Proc. 2nd Greek Conf. on Ceramics, Athens, 1999. Greek Ceramic Soc. 2001, pp.33-46 (in Greek).

6. "Structure and dynamics of germanate glasses xNa_2O-$(1-x)GeO_2$",
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Proc. XVII Greek Conf. on Solid State Physics, Xanthi, Greece, September 2001, pp. 103-106 (in Greek).

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Proc. Laser Techniques and Systems in Art Conservation, Munich (June 2001). Proc. SPIE Int. Soc. Opt. Eng, Renzo Salimbeni (Ed.), vol. 4402, pp. 139-144.

8. "CN violet band emission as a time-resolved optical probe of transient temperature, induced by laser ablation of type I collagen from bovine Achilles tendon",
M. Kompitsas and T. Theodossiou,
Proc. Laser-Tissue Interactions, Therapeutic Applications and Photodynamic Therapy, SPIE, 2001, vol. 4433, pp. 186-192.

3. Publications in Technical Journals

1. "Research on optical, polymeric and molecular materials assisted by VUV light at the NHRF",
E. Sarantopoulou, Z. Kollia and A.C. Cefalas,
Lamda Highlights 58, 6 (2001).

4. Dissertations

a. PhD theses

1. "Theoretical study and calculations of characteristics and properties of doubly excited states and of the phenomenon LoSurdo-Stark in atomic systems",
S. Themelis, supervisors C.A. Nicolaides and Y. Komninos, University of Athens (2001).

b. MSc theses

1. "Growth of multilayered Ta/TaO_x/Ta structures by Pulsed Laser Deposition (PLD) characterization",
N. Vakakis, supervisors M. Kompitsas, N. Vainos and F. Roubani-Kalantzopoulou, National Technical University of Athens, Chem. Eng. Dept. (2001).