

**1. Papers in Refereed Journals**

1. "An accurate description of the ground and excited states of CH",  
A. Kalamos, A. Mavridis and A. Metropoulos,  
J. Chem. Phys. 111, 9536 (1999).
  
2. "Complex coordinate calculations on autoionizing states of HeH and H<sub>2</sub>",  
M. Honigmann, G. Hirsch, R.J. Buenker, I.D. Petsalakis and G. Theodorakopoulos,  
Chem. Phys. Lett. 305, 465 (1999).
  
3. "Theoretical study on electronic states of carbon monofluoride and on the  
predissociation of the lower lying states",  
I.D. Petsalakis,  
J. Chem. Phys. 110, 10730 (1999).
  
4. "Ab initio calculations on the ground and excited states of BeOH and MgOH",  
G. Theodorakopoulos, I.D. Petsalakis and I.P. Hamilton,  
J. Chem. Phys. 111, 10484 (1999).
  
5. "Theoretical calculations on the linewidths of rovibrational levels of the 3d Rydberg  
states of BeH and BeD",  
I.D. Petsalakis, D. Papadopoulos, G. Theodorakopoulos and R.J. Buenker,  
J. Phys. B 32, 3225 (1999).
  
6. "Forward-backward semiclassical dynamics without prefactors",  
J. Shao and N. Makri,  
J. Phys. Chem. 103, 7753 (1999).
  
7. "Short range coherence in the energy transfer of photosynthetic light harvesting  
systems",  
J. Ray and N. Makri,  
J. Phys. Chem. 103, 9417 (1999).
  
8. "Forward-backward semiclassical dynamics with linear scaling",  
J. Shao and N. Makri,  
J. Phys. Chem. 103, 9479 (1999).
  
9. "Forward-backward semiclassical calculation of spectral lineshapes: I<sub>2</sub> in a rare gas  
cluster",  
O. Kuhn and N. Makri,  
J. Phys. Chem. 103, 9487 (1999).
  
10. "Iterative evaluation of the path integral for a system coupled to an anharmonic bath",  
N. Makri,  
J. Chem. Phys. 111, 6164 (1999).

11. "Does a delta function atom interacting with a superstrong laser pulse exhibit stabilization?",  
Th. Mercouris and C.A. Nicolaides,  
J. Phys. B 32, 2371 (1999).
12. "On the application of conventional Quantum Chemistry methods of computation to states perturbed by the continuous spectrum",  
C.A. Nicolaides,  
Int. J. Quant. Chem. 71, 209 (1999).
13. "Even parity 1P resonances of H<sup>-</sup> up to the n=5 threshold",  
M. Bylicki and C.A. Nicolaides,  
J. Phys. B 32, L317 (1999).
14. "Quantum mechanical vs semiclassical calculations of dc-field-induced tunneling rates of Li 1s<sup>2</sup> 2s <sup>2</sup>S, 1s<sup>2</sup> 2p <sup>2</sup>P<sup>0</sup> and 1s<sup>2</sup> 3d <sup>2</sup>D",  
S.I. Themelis and C.A. Nicolaides,  
Phys. Rev. A 59, 2500 (1999).
15. "Molecular shape, the shape of the geometrically active atomic states and hybridization",  
Y. Komninos and C.A. Nicolaides,  
Int. J. Quant. Chem. 71, 25 (1999).
16. "Examination of the structural properties of the H<sub>3</sub>O<sup>+</sup>(H<sub>2</sub>O)<sub>n</sub> clusters in the (μPT) grand canonical ensemble, by employing a new many-body potential energy function",  
S.V. Shevkunov, A. Vegiri,  
J. Chem. Phys. 111, 9303 (1999).
17. "Solitons and non-dissipative diffusion",  
N. Theodorakopoulos and M. Peyrard,  
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18. "Organic conductors of τ-phase",  
G.C. Papavassiliou, K. Murata, J.P. Ulmet, A. Terzis, G.A. Mousdis, H. Yoshino, A. Oda, D. Vignolles and C.P. Raptopoulou,  
Synth. Met. 103, 1921 (1999).
19. "Magnetic nature of τ-(EDO-S,S-DMEDT-TTF)<sub>2</sub>(AuBr<sub>2</sub>)<sub>2</sub>(AuBr<sub>2</sub>)<sub>y</sub> (y≈0.75)",  
H. Yoshino, K. Murata, T. Sasaki, K. Limura, A. Oda and G.C. Papavassiliou,  
Synth. Met. 103, 2010 (1999).
20. "Hypothetical buckminsterfullerenedithio-tetrathiafulvalene",  
K.H. Lee, S.S. Park, H. M. Eun, J.Y. Lee, C.R. Chao, C.H. Lee and G.C. Papavassiliou,  
Synth. Met. 103, 2432 (1999).
21. "Optical and related properties of synthetic low-dimensional semiconductors based on inorganic units",  
G.C. Papavassiliou, G.A. Mousdis, I.B. Pistolis, M.G. Kanatzidis, and A. Axtell III,  
Synth. Met. 103, 2689 (1999).

22. "Symmetry change in the angular dependence of magnetoresistance of the two dimensional organic conductor  $\tau$ -(EDO-S,S-DMEDT-TTF)<sub>2</sub>(AuBr<sub>2</sub>)<sub>2</sub>(AuBr<sub>2</sub>)<sub>y</sub> (y $\approx$ 0.75)", H. Yoshino, K. Limura, T. Sasaki, A. Oda, G.C. Papavassiliou and K. Murata, J. Phys. Soc. Jpn. 68, 177 (1999).
23. "Excitonic bands in the optical absorption spectra of (Bu<sub>4</sub>N)CuBr<sub>2</sub>, (Et<sub>4</sub>N)<sub>2</sub>Cu<sub>2</sub>Br<sub>4</sub>, (Pr<sub>4</sub>N)<sub>2</sub>Cu<sub>4</sub>Br<sub>6</sub>, (Bu<sub>4</sub>N)<sub>2</sub>Cu<sub>2</sub>I<sub>4</sub>, (Me<sub>4</sub>N)Cu<sub>2</sub>I<sub>3</sub>, (Pr<sub>4</sub>N)<sub>4</sub>Ag<sub>4</sub>I<sub>8</sub>, (Me<sub>4</sub>N)Ag<sub>2</sub>I<sub>3</sub>, (Et<sub>4</sub>N)Ag<sub>2</sub>Br<sub>3</sub>, and similar compounds", G.C. Papavassiliou, G.A. Mousdis, A. Terzis, and C.P. Raptopoulou, Z. Naturforsch. B 54, 109 (1999).
24. "Preparation and characterization of [C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>SC(NH<sub>2</sub>)<sub>2</sub>]<sub>3</sub>PbI<sub>5</sub> and [C<sub>10</sub>H<sub>7</sub>CH<sub>2</sub>NH<sub>3</sub>]<sub>1</sub>PbI<sub>3</sub> organic-inorganic hybrid compounds", G.C. Papavassiliou, G.A. Mousdis, C.P. Raptopoulou and A. Terzis, Z. Naturforsch. B 54, 1405 (1999).
25. "Some new organic-inorganic hybrid semiconductors based on metal-halide units: Structural, optical and related properties", G.C. Papavassiliou, G.A. Mousdis, and I.B. Koutselas, Adv. Mater. Opt. Electron. 9, 265 (1999).
26. "Crystal structure and vibrational spectra of Li<sub>2</sub>BAlO<sub>4</sub>", V. Psycharis, J.A. Kapoutsis and G.D. Chryssikos, J. Solid State Chem. 142, 214 (1999).
27. "Structure of fast-ion-conducting AgI-doped borate glasses in bulk and thin film forms", C.P. Varsamis, E.I. Kamitsos and G.D. Chryssikos, Phys. Rev. B 60, 3885 (1999).
28. "Vacuum ultraviolet 4f<sup>9</sup>5d  $\rightarrow$  4f<sup>10</sup> interconfigurational transitions of Ho<sup>3+</sup> ions in LiLuF<sub>4</sub> single crystals", A.C. Cefalas, E. Sarantopoulou and Z. Kollia, J. Opt. Soc. Am. B 16, 625 (1999).
29. "4f<sup>9</sup>5d  $\rightarrow$  4f<sup>10</sup> spin-allowed and spin-forbidden transitions of Ho<sup>3+</sup> ions in LiYF<sub>4</sub> single crystals in the vacuum ultraviolet", E Sarantopoulou, Z. Kollia, A.C. Cefalas, Opt. Commun. 169, 263 (1999).
30. "Mass spectroscopic and degassing characteristics of polymeric materials for 157 nm photolithography", A.C. Cefalas, E. Sarantopoulou, P. Argitis, and E. Gogolides, Appl. Phys. A 69, 5929 (1999).
31. "An electron-swarm mass spectrometric study of electron attachment to thiophenol and its anion molecule reactions", S.M. Spyrou and G. Roupakas, Chem. Phys. Lett. 304, 79 (1999).

## 2. Papers in Proceedings of International and National Conferences

1. "Studies of hybridization by ab-initio atomic calculations",  
Z. Xiong and N.C. Bacalis,  
Proc. XV Greek Conf. on Solid State Physics, Patras, 1999, pp. 243-247 (in Greek).
2. "Field-induced symmetry change in the magnetoresistance of two-dimensional  $\tau$ -type organic conductors",  
H. Yoshino, K. Murata, T. Konoike, T. Sasaki and G.C. Papavassiliou,  
4<sup>th</sup> Int. Symp. Adv. Phys. Fields: Quantum Phenomena in Adv. Materials at High Magnetic Fields, Osaka, Japan, 1999, pp. 291-294.
3. "Fast ion conducting glasses",  
C.P. Varsamis, E.I. Kamitsos and G.D. Chryssikos,  
Proc. of the Int. G.N. Papatheodorou Symposium, S. Boghosian, V. Dracopoulos, C.G. Kontoyiannis and G.A. Voyiatzis (Eds.), ICE/HT, Patras, Greece, 1999, pp. 141-145.
4. "Structural and dielectric study of mixed cation glasses  $x\text{Na}_2\text{O} \cdot (1-x)\text{Ag}_2\text{O} \cdot 3\text{B}_2\text{O}_3$ ",  
C.P. Varsamis, E.I. Kamitsos, G.D. Chryssikos, I.T. Dalmaris and I.D. Koniaris,  
Proc. XV Greek Conf. on Solid State Physics, Patras, 1999, pp. 157-160 (in Greek).
5. "Laser ablation of nylon 66 under UV irradiation at 193nm and 248 nm",  
N. Vassilopoulos, A.C. Cefalas, Z. Kollia, E. Sarantopoulou, C. D. Skordoulis,  
Proc. 10<sup>th</sup> Int. School on Quantum Electronics, Laser Physics and Applications, P.A. Atanasov and D.V. Stoyanov (Eds.), SPIE-Int. Soc. Opt. Eng. (1999), vol. 3571, pp. 328-332.
6. "Laser plasma X-Ray contact microscopy of living specimens",  
A.C. Cefalas, P. Argitis, Z. Kollia, E. Sarantopoulou, T. W. Ford, A. D. Stead, A. Marranca  
C. N. Danson, J. Knott and D. Neely,  
Proc. 10<sup>th</sup> Int. School on Quantum Electronics, Laser Physics and Applications, P.A. Atanasov and D.V. Stoyanov (Eds.), SPIE-Int. Soc. Opt. Eng. (1999), vol. 3571, pp. 388-391.
7. " $4f^9 5d \rightarrow 4f^{10}$  transitions of  $\text{Ho}^{3+}$  ions in  $\text{LiYF}_4$  single crystals",  
E. Sarantopoulou, Z. Kollia and A.C. Cefalas,  
Proc. 10th Int. School on Quantum Electronics, Laser Physics and Applications, P.A. Atanasov and D.V. Stoyanov (Eds.), SPIE-Int. Soc. Opt. Eng. (1999), vol. 3571, pp. 185-189.
8. "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. Marranca, C.N. Danson, J. Knott, D. Neely,  
Proc. International Conference on Lasers 98, Tucson, Arizona (USA), STS press, Mc Lean (1999), pp. 649-652.
9. "Absorbance and outgassing of photoresist polymeric materials and nylon 6.6 for 157 nm lithography",  
A.C. Cefalas, E. Sarantopoulou, E. Gogolides, P. Argitis,  
Interface '99 Proceedings, 14-16 November 1999, San Diego, California, USA, pp. 197-205, 1999 (Invited).

10. "Polymeric materials for plasma etching",  
E. Tegou, E. Gogolides, P. Argitis, A.C. Cefalas and A. Boudouvis,  
Proc. 2<sup>nd</sup> Greek Conf. on Chem. Engineering, Thessaloniki, 1999, pp. 733-736 (in Greek).
11. "Design of new materials for 193 nm microlithography based on polyacrylate hydroxy-alkylesters",  
M. Vassilopoulou, P. Argitis, E. Gogolides, M. Vogiatjis, D. Dimotikali, and A.C. Cefalas,  
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12. "System (complex) for optical monitoring of coastal marine water area: concept and methods",  
V.V. Fadeev, M. Kompitsas and R. Reuter,  
Proc. EUROPTO - Series on Environmental Sensing and Applications, Munich Germany,  
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13. "Qualitative determination of hazardous polycyclic aromatic compounds in aquatic environment with the use of lasers",  
F. Roubani-Kalantzopoulou, M. Kompitsas, I. Bassiotis, E. Kalogirou, A. Mavropoulos and V. Siokos,  
Proc. 6<sup>th</sup> Intern. Conference on Environmental Science and Technology, K. Lekkas (Ed.),  
Dept. Env. Studies, Univ. of Eagean, Samos, Greece, 1999, vol. C, pp. 372-380.
14. "Ablation of steel: Qualitative and quantitative determination",  
F. Roubani-Kalantzopoulou, I. Bassiotis, E. Kalogirou, A. Mavropoulos and M. Kompitsas,  
Proc. 2<sup>nd</sup> Greek Conf. of Chem. Engineering, Thessaloniki, 1999, pp. 729-732 (in Greek).

<b>3.     Dissertations</b>
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**a.     PhD theses**

1. "Synthesis and spectroscopic studies of technologically important glasses. Structure-property correlations in borate glasses",  
A. Patsis, supervisors E.I. Kamitsos and A.T. Tsatsas, University of Athens, Chemistry Department (1999).

**b.     MSc theses**

1. "Laser vacuum ultraviolet and ultraviolet ablation of polymers",  
N. Vassilopoulos, supervisors A.C. Cefalas and F. Viras, University of Athens, Physics Department (1999).

**c.     Honors theses**

1. "Qualitative and quantitative determination of Cr and Ni on steel samples by Laser-induced Plasma spectroscopy",  
A. Giannoudakos, supervisors M. Kompitsas and F. Roubani-Kalantzopoulou, National Technical University of Athens, Chem. Eng. Dept. (1999).

2. “Qualitative and quantitative determination of poly-aromatic hydrocarbons and oil products by laser-induced fluorescence (LIF)”,  
K. Tselios, supervisors M. Kompitsas and F. Roubani-Kalantzopoulou, National Technical University of Athens, Chem. Eng. Dept. (1999).