

**1. Papers in Refereed Journals**

1. "Electronic-structure and lifetime of an excimer state of HeF",  
I.D. Petsalakis,  
J. Chem. Phys. 94, 2906 (1991).
2. "Asymmetric dissociation and bending potentials of H<sub>2</sub>S in the ground and excited electronic states",  
G. Theodorakopoulos and I.D. Petsalakis,  
Chem. Phys. Lett. 178, 475 (1991).
3. "Theory and ab initio calculation of partial widths and interchannel coupling in predissociating diatomic states - application to HeF",  
I.D. Petsalakis, T. Mercouris, G. Theodorakopoulos and C.A. Nicolaides,  
Chem. Phys. Lett. 182, 561 (1991).
4. "Nearly diabatic states by maximization of the non-orthonormal overlap between model-diabatic and MRD-CI wave-functions",  
I.D. Petsalakis, G. Theodorakopoulos, C.A. Nicolaides and R.J. Buenker,  
Chem. Phys. Lett. 185, 359 (1991).
5. "Theoretical-study on the electronic states of CH<sub>2</sub><sup>+</sup>",  
G. Theodorakopoulos and I.D. Petsalakis,  
J. Mol. Struct.- Theochem 230, 205 (1991).
6. "Nonclassical hydrogen complexes of the alkaline-earths",  
E.D. Simandiras and C.A. Nicolaides,  
Chem. Phys. Lett. 185, 529 (1991).
7. "Closed summation of large perturbation orders - the s-d series for hydrogen in a magnetic-field",  
H.M. Schmidt,  
J. Phys. B 24, 2947 (1991).
8. "Above-threshold ionization in the presence of a dc field - application to H<sup>-</sup>",  
T. Mercouris and C.A. Nicolaides,  
J. Phys. B 24, L57 (1991).
9. "The meaning of correlations in the theory of multiphoton detachment",  
T. Mercouris and C.A. Nicolaides,  
J. Phys. B 24, L165 (1991).
10. "Computation of the widths of doubly excited-states coupled by external AC or DC

fields",

T. Mercouris and C.A. Nicolaides,  
J. Phys. B 24, L557 (1991).

11. "Excited  $^2\Sigma_u^+$  states of  $\text{He}_2^+$  and the formation of explosive  $\text{He}_2^{2+}$ ",  
A. Metropoulos and C.A. Nicolaides,  
Chem. Phys. Lett. 187, 487 (1991).

12. "Binding of an electron by He and Xe",  
C.A. Nicolaides and G. Aspromallis,  
Phys. Rev A 44, 2217 (1991).

13. "Magnitude of static and dynamic polarizabilities of doubly excited-states of negative-ions - application to the second bound-state of  $\text{H}^-$ ",  
C.A. Nicolaides and T. Mercouris,  
Phys. Rev. A 44, 7827 (1991).

14. "Complex Stark eigenvalues for excited-states of hydrogenic ions from analytic continuation of real variationally based large-order perturbation-theory",  
J.N. Silverman and C.A. Nicolaides,  
Chem. Phys. Lett. 184, 321 (1991).

15. "Chemical trapping of molecular hydrogen by BeO",  
C.A. Nicolaides and P. Valtazanos,  
Chem. Phys. Lett. 176, 239 (1991).

16. "The  $(\text{H}_2\text{O})_2^*$  cluster at a geometry of intramolecular charge transfer",  
C.A. Nicolaides and P. Valtazanos,  
J. Mol. Structure: Theochem 234, 483 (1991).

17. "Calculation of the electron momentum density and Compton scattering measurements for Nickel",  
D.L. Anastassopoulos, G.D. Priftis, N.I. Papanicolaou, N.C. Bacalis and D.A. Papaconstantopoulos,  
J. Phys.: Condensed Matter 3, 1099 (1991).

18. "Semiclassical solitons and the  $S = 1/2$  Heisenberg-model",  
N. Theodorakopoulos and N.C. Bacalis,  
Phys. Rev. Lett. 67, 3018 (1991).

19. "Crystal structures and properties of some cation radi EDOMDTTTF, EDOVDTTTF, EDOBTTTF, EDOPDSDTF, EDODMPTTF, BEDTTTF and BMDTTTF",  
A. Terzis, A. Hountas, B. Hilti, G. Mayer, J.S. Zambounis, D. Lagouvardos, V. Kakoussis, G. Mousdis and G.C. Papavassiliou,  
Synth. Met. 42, 1715 (1991).

20. "Chemical and physical properties of some EDT-TTF salts",  
W. Biberacher, H. Muller, C.P. Heidmann, C. Probst, A. Lerf, K. Andres, V.C. Kakoussis, G.C. Papavassiliou, J. Riede and H.U. Hummel,  
Synth. Met. 42, 2377 (1991).
21. "Electronic-structure and physical-properties of unsymmetrical TTF based organic salts",  
L. Ducasse, J. Amiell, P. Delhaes, G. Mousdis, G.C. Papavassiliou and A. Terzis,  
Synth Met. 42, 2483 (1991).
22. "Some unsymmetrical polyheterotetraheterafulvalenes and their conducting salts",  
G.C. Papavassiliou,  
Synth. Met. 42, 2535 (1991).
23. "New Langmuir-Blodgett-films based on substituted 1,2-dithiolium-TCNQ radical-anion salts",  
V. Gionis, O. Fichet, M. Izumi, C. Garrigoulagrange, J. Amieli, G.C. Papavassiliou and P. Delhaes,  
Chem. Lett. 20, 871 (1991).
24. "Preparation of some bis(Alkylthio)-bis(Alkylseleno)tetrathiafulvalenes",  
G.C. Papavassiliou, V.C. Kakoussis and D.J. Lagouvardos,  
Z. Naturforsch. B 46, 1269 (1991).
25. "5,6-ethylenediseleno-1,3-dithiolo[4,5-B][1,4]dithiin-2-thione as starting material for the preparation of new tetrathiafulvalenes",  
G.C. Papavassiliou, D.J. Lagouvardos and V.C. Kakoussis,  
Z. Naturforsch. B 46, 1730 (1991).
26. "Bond length - Raman frequency correlations in borate crystals",  
G.D. Chryssikos,  
J. Raman Spectroscopy 22, 645 (1991).
27. "Chemical relaxations at the glass transition of a lithium conducting glass",  
G.D. Chryssikos, E.I. Kamitsos, M.S. Bitsis and A.P. Patsis,  
J. Non-Cryst. Solids 131, 1068 (1991).
28. "A classification of metaborate crystals based on Raman spectroscopy",  
G.D. Chryssikos, J.A. Kapoutsis, A.P. Patsis and E I. Kamitsos,  
Spectrochim. Acta Pat A 47, 1117 (1991).
29. "Borate glass structure by raman and infrared spectroscopies",  
E.I. Kamitsos and G.D. Chryssikos,  
J. Mol. Struct. 247, 1 (1991).
30. "Evidence from vibrational spectroscopy for cluster and tissue pseudophases in glass",  
M.D. Ingram, G.D. Chryssikos and E.I. Kamitsos,

J. Non-Cryst. Solids 131, 1089 (1991).

31. "Lithium conducting borate glasses - evidence for 2 broad distributions of cation-hosting environments",

E.I. Kamitsos, G.D. Chryssikos, A.P. Patsis and M.A. Karakassides,  
J. Non-Cryst. Solids 131, 1092 (1991).

32. "The glass-transition temperature of lithium alkali borates",

S. Koritala, K. Farooqui, M. Affatigato, S. Feller, S. Kambeyanda, S. Ghosh, E.I. Kamitsos, G.D. Chryssikos and A. P. Patsis,  
J. Non-Cryst. Solids 134, 277 (1991).

33. "Interactions between cations and the network in mixed alkali borate glasses",

E.I. Kamitsos, A.P. Patsis and G.D. Chryssikos,  
Phys. Chem. Glasses 32, 219 (1991).

34. "Behavior of bis(Alkylthio)tetrathiafulvalene derivatives of Langmuir-Blodgett-Films upon iodine exposure",

M. Vandevyver, M. Roulliy, J.P. Bourgoïn, A. Barraud, V. Gionis, V.C. Kakoussis, G. A. Mousdis, J.P. Morand and O. Noel,  
J. Phys. Chem. 95, 246 (1991).

35. "Laser-induced fluorescence (LiF) of Hg<sub>2</sub> and Hg<sub>3</sub> via dissociation of HgBr<sub>2</sub> at 157 nm",

C. Skordoulis, E. Sarantopoulou, S.M. Spyrou, C. Kosmidis and A.C. Cefalas,  
Z. Phys. D 18, 175 (1991).

36. "The even-parity J = 0 autoionizing spectrum of strontium below the 4d<sub>5/2</sub> threshold - observation and theoretical-analysis",

M. Kompitsas, S. Goutis, M. Aymar and P. Camus,  
J. Phys. B 24, 1557 (1991).

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

1. "Thermal solitons in the Toda chain",

N. Theodorakopoulos and N.C. Bacalis,

Proc. 7<sup>th</sup> Greek Conference in Solid State Physics, Thessaloniki, 22-25 September 1991, pp.190-196 (in Greek).

## **3. Book Chapters**

1. "Thermally excited lattice solitons",

N. Theodorakopoulos,

Proton transfer in hydrogen-bonded systems, T. Bountis (Ed.) pp. 131-137, Plenum Press, NATO ASI Series B (Physics) 291, (1991).

2. "Use of lasers in the study of the glassy state",  
E.I. Kamitsos, G.D. Chryssikos and C.A. Nicolaides,  
Laser Applications in Basic Sciences, Engineering and Medicine. K. Siomos (Ed.), pp. 97-112  
(1991).
3. "Vibrational structural studies of alkali borate glasses",  
E.I. Kamitsos and G.D. Chryssikos,  
Solid State Ionics, M. Balkanski and C. Dalmas (Eds.), European Materials Research Society,  
pp. 87-106 (1991).
4. "Spectroscopic investigation of (2,5-DM-DCNQI)<sub>2</sub> materials in bulk and thin film  
forms",  
E.I. Kamitsos, G.D. Chryssikos and V. Gionis,  
Lower-Dimensional Systems and Molecular Electronics, R.M. Metzger, P. Day and G.C.  
Papavasiliou (Eds.), Plenum Press-NATO Scientific Affairs Division, vol. 248, pp. 197-204  
(1991).

<b>4. Dissertations</b>
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**a. PhD theses**

1. "Study of the interactions of the even parity auto-ionizing Rydberg states 4dnl of Sr",  
S. Goutis, supervisors M. Kompitsas and A. Bolovinos, University of Ioannina, Dept. of Physics  
(1991).
2. "Photodissociation of molecules with molecular fluorine laser at 157 nm",  
C. Skordoulis, supervisors A.C. Cefalas and P. Tsekeris, University of Ioannina, Physics  
Department (1991).
3. "Phase conjugated waves in Na vapour with ps laser pulses",  
A. Micropoulos, supervisors A.C. Cefalas and P. Tsekeris, University of Ioannina, Physics  
Department (1991).

**b. Honors theses**

1. "Glass synthesis by the sol-gel technique",  
M.S. Bitsis, supervisors E.I. Kamitsos and A.T. Tsatsas, University of Athens, Chemistry  
Department (1991).