

CURRICULUM VITAE

Surname: **KOSMIDIS**

First name: **CONSTANTINE**

Position held: -Professor, Department of Physics, University of Ioannina,
Ioannina, Greece

-Dean of School of Science, University of Ioannina

-Scientific Director of the Central Laser Facility-University of
Ioannina

Current research interests and activities:

- study of the interaction of strong and/or short laser pulses with molecules and molecular clusters (multi-electron dissociative ionization, molecular alignment/orientation and molecular dynamics).
- development of analytical laser based techniques
- thin film development by pulsed laser deposition and optical characterization of nanostructured materials

Research Experience/experimental techniques:

- Ultraviolet and Vacuum Ultraviolet absorption spectroscopy
- Resonant Multiphoton Ionization spectroscopy in static and supersonic jets
- Raman spectroscopy
- Laser Induced Fluorescence
- Mass spectrometry
- Laser ablation
- Matrix Assisted Laser Desorption Ionization (MALDI)
- Molecular dynamics under asymmetric laser fields ($\omega+2\omega$)
- Pump/probe fs spectroscopy

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Collaborations:

- University College of Cork -Ireland
- National Research Foundation, Athens, Greece
- University of Glasgow- Glasgow Scotland
- BESSY –Berlin, Germany
- Rutherford Appleton Laboratory- England
- IESL- FORTH-Crete-Greece
- TOPS Lab., University of Strathclyde- Glasgow, Scotland
- Max Planck Institute (MPQ)-Munich, Germany
- LENS- Florence, Italy
- ILM-University of Lyon 1, Lyon/France

Publications in international refereed journals

- [E1]. "Absolute Vacuum Ultraviolet Absorption Spectra of Picolines."
C. Kosmidis, A. Bolovinos and P. Tsekeris
J. Mol. Spectr. 120, 11 (1986)
- [E2]. "Study of the 3s Rydberg States of 2-, 3- and 4-Picolines by Multiphoton Ionization Spectroscopy."
C. Kosmidis, A. Bolovinos and P. Tsekeris
J. Mol. Spectr. 126, 193 (1987)
- [E3]. "The Vacuum-Ultraviolet Absorption Spectra of Substituted p-Benzoquinones."
P. Brint, P. Tsekeris, A. Bolovinos and C. Kosmidis.
J. Chem. Soc. Faraday Trans. 2, 85, 177 (1989)
- [E4]. "Preresonance Raman Spectra of Methylpyridines"
C. Kosmidis, A. Bolovinos and P. Tsekeris
Journal of Raman Spectroscopy 21, 737 (1990)
- [E5]. "Laser Induced Fluorescence (LIF) of Hg₂ and Hg₃ via dissociation of HgBr₂ at 157 nm"
C. Skordoulis, E. Sarantopoulou, S. M. Spyrou, C. Kosmidis and A.C.Cefalas
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- [E6]. "The Vacuum Ultraviolet Absorption Spectrum of Propanone, Butanone and the Cyclic Ketones C_n H_{2n-2}O (n=4,5,6,7)"
L. O' Toole, P. Brint, C. Kosmidis, G. Boulakis and P. Tsekeris
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C. Kosmidis, G. Boulakis, A. Bolovinos, P. Tsekeris and P. Brint
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- [E9]. "Dopant enhanced ablation of nitrocellulose by nitrogen laser"
C.Kosmidis and C.Skordoulis
Applied Physics A56, 64(1993)
- [E10]. "Polarization measurements of the resonant multiphoton ionization spectrum of the 3s Rydberg states of Monomethylpyridines",
C. Kosmidis, A. Bolovinos and P. Tsekeris,
J. Mol. Spectr. 160, 186 (1993)
- [E11]. "Multiphoton process in open atmosphere in the wavelength Region 224-230nm"
A. Clark, C. Kosmidis, R.M. Deas, K.W.D. Ledingham, A. Marshall, J. Sander and R.P.Singhal
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- [E12]. "Resonant Ionization of oxygen and hydrogen atoms following laser induced photodissociation of nitrobenzene vapour"
A.Clark, C.Kosmidis, K.W.D.Ledingham, A.Marshall, J.Sander R.P., Singhal and M.Campbell
Journal of Physics B 26, L665 (1993)
- [E13]. "On the dissociation pathways of nitrobenzene"
C. Kosmidis, K.W.D. Ledingham, A. Clark, A. Marshall, R. Jennings, J. Sander and R.P. Signal
Int. J. Mass Spectrom. and Ion Proc. 135, 229 (1994)
- [E14]. "Detection and Identification of Explosive Compounds Using laser Ionization Time of Flight Techniques"
A. Marshall, A. Clark, K.W.D. Ledingham, J. Sander, R.P. Singhal, C. Kosmidis and R.M. Deas,
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A. Marshall, A. Clark, R.M. Deas, C. Kosmidis, K.W.D. Ledingham, W. Peng and R.P. Signal,
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C.Kosmidis, A.Marshall,A.Clark, R.M.Deas, K.W.D.Ledingham and R.P.Singhal.
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- [E17]. "Formation of atomic hydrogen in Matrix-assisted laser desorption ionization"
C.T.J. Scott, C Kosmidis, W.J. Jia, K.W.D. Ledingham and R.P. Singhal
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- [E18]. "A Tandem Reflectron Time-of-flight Mass Spectrometer for the Investigation of Laser Photofragmentation of Molecular ions"
W.J. Jia, K.W.D. Ledingham, C.T.J. Scott, C Kosmidis and R.P. Singhal
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- [E19] "A Comparison of the Femto-, Pico- and Nanosecond Multiphoton Ionization and Dissociation Processes of NO₂ at 248 and 496 nm"
K.W.D. Ledingham, C Kosmidis, S. Georgiou, S. Couris and R.P. Singhal
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- [E21] "Laser Mass spectrometry of Biological Molecular Ions Produced by Matrix Assisted Laser Desorption Ionization (MALDI)"
W.J. Jia, C Kosmidis, K.W.D. Ledingham, C.T.J. Scott and R.P. Singhal
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- [E22] "Multiphoton Ionization and Dissociation of NO₂ by fsec laser pulses"
R.P. Signal, H.S. Kilic, K.W.D. Ledingham, C. Kosmidis, T. McCanny, A.J. Langley and W. Shaikh
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- [E23] "Photofragmentation studies of biomolecular ions of amino acids using tandem reflectron time-of flight mass spectrometer"
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- [E24] "Identification of Two Allylbenzene Conformers by One-and Two photon Resonant Multiphoton Ionization Spectroscopy in a Supersonic Jet"
J. G. Philis and C. Kosmidis
J. Mol. Spectrosc. 181, 323 (1997)
- [E25] "Multiphoton Ionization and dissociation of Nitromethane using femtosecond laser pulses at 375 and 750 nm"
H.K. Kilic, K.W.D. Ledingham, C. Kosmidis, T. McCanny, R.P. Singhal, S.L Wang, D.J.Smith, A.Langley and W. Shaikh
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- [E26] "On the fragmentation of nitrobenzene and nitrotoluene isomers using femtosecond laser pulses at 375nm"
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- [E27] "UV Laser Multiphoton Ionization-Dissociation of Phenylsilane and its homogeneous clusters"
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- [E28]. "Ionization and Dissociation of Benzaldehyde using short intense laser pulses "
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- [E29]. " Behavior of Polyatomic Molecules in Intense Infrared Laser Beams"
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- [E30]. "Time of flight Mass Spectrometry of Aromatic Molecules Subjected to High Intensity Laser Beams"
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- [E34]. 'Laser induced ionisation/dissociation of cyclopentanone in the 320-370 nm region'
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- [E36]. 'Multiply Charged Intact Ions of Polyatomic Cyclic Molecules Generated by Strong Laser Fields'
C. Kosmidis, P. Tzallas, K.W.D. Ledingham, T. McCanny, R.P. Singhal, P.F.Taday, A.J. Langley
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- [E37]. 'Translation characteristics in the ablation of chlorobenzene van der Waals solids at 248nm'
S.Georgiou, C. Kosmidis, A. Koubenakis, W. Jia, KW.D. Ledingham
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- [E38]. 'Resonant Laser Mass Spectrometry: Fragmentation Patterns from ¹³C Naturally Labelled Molecules'
J.G. Philis, C. Kosmidis
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- [E39]. 'An investigation of the angular distributions of fragment ions arising from the linear CS₂ and CO₂ molecule'
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- [E40]. 'Unusual fragmentation patterns from the dissociation of some small molecules'
P.Graham, X. Fang, KWD Ledingham, RP Singhal, T McCanny, D.J.Smith, P.Tzallas, C.Kosmidis, A.J.Langley, P.Taday
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- [E41] 'The angular distributions of fragment ions from labelled and unlabelled N₂O in intense laser fields'
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P.Tzallas, C. Kosmidis, KWD Ledingham, R.P. Singhal, T. McCanny, P.Graham, S.M.Hankin, P.F. Taday, A.J.Langley
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- [E43]. 'Coulomb explosion in aromatic molecules and their deuterated derivatives'
P.Tzallas, C. Kosmidis, P.Graham, KWD Ledingham, T. McCanny, S.M.Hankin, R.P. Singhal, P.F. Taday, A.J.Langley
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- [E44]. '(3s \square n) REMPI of jet-cooled acetaldehyde using two laser beams'
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P.Graham, KWD Ledingham, RP Singhal, S.M. Hankin, T McCanny, X. Fang,, P.Taday, A.J.Langley, C.Kosmidis
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A.D. Tasker, L.Robson, S.M.Hankin, KWD Ledingham, RP Singhal, X. Fang, T McCanny, C.Kosmidis, P.Tzallas, A.J.Langley, P.Taday, E.J.Divall
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- [E48]. 'On the fragment ion angular distributions arising from the tetrahedral molecule CH₃I'
P.Graham, KWD Ledingham, T McCanny, S.M. Hankin, X. Fang,, C.Kosmidis, P.Tzallas, A.J.Langley, P.Taday
J. Phys. B 34, 4015(2001)
- [E49]. 'Femtosecond laser time of flight mass spectrometry of labile molecular analytes: laser-desorpted nitro-aromatic molecules'
S.M. Hankin, A.D. Tasker, L. Robson, KWD Ledingham, X. Fang, P. McKenna, R.P. Singhal, C.Kosmidis, P.Tzallas, D.A. Jaroszynski, D.R. Jones, R.C. Isaak, S. Jamison
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- [E51]. 'Ionisation and fragmentation of laser desorbed polycyclic aromatic hydrocarbons using femtosecond and nanosecond post ionisation'
L.Robson, A.D. Tasker, KWD Ledingham, P. McKenna, T.McCanny, C. Kosmidis, P.Tzallas, DA Jaroszynski, DR Jones, RC Isaac, S. Jamison
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- [E54]. 'Multielectron Dissociative Ionization of CH₃I under psec Strong Laser Irradiation'
P. Siozos, S. Kazianis and C. Kosmidis
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W. Fuss, C. Kosmidis, W.E. Schmid and S.A. Trushin
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P. Siozos, S. Kaziannis, C. Kosmidis and A. Lyras
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C. Kosmidis, S. Kaziannis, P. Siozos, A. Lyras, L. Robson, KWD Ledingham, P.McKenna, DA Jaroszynski
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- [E73]. 'On the deposition mechanisms and the formation of glassy Cu-Zr thin films' G.A. Almyras, G.M. Matenoglou, Ph. Komninou, C. Kosmidis, P. Patsalas, G.A. Evangelakis J. Appl. Phys. 107, 84313 (2010)

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N.T. Panagiotopoulos, G. Karras, E. Lidorikis, D.C. Koutsogeorgis, C. Kosmidis, P. Patsalas
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G. Karras, C. Kosmidis
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A Siozios, DC Koutsogeorgis, E Lidorikis, GP Dimitrakopoulos, N Pliatsikas, G. Vourlias, T. Kehagias, Ph. Komninou, W. Cranton, C. Kosmidis, P. Patsalas
Journal of Physics D: Applied Physics 48 (28), 285306
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E. Tzianaki, M. Bakarezos, G.D Tsibidis, Y. Orphanos, P.A Loukakos, C. Kosmidis, P. Patsalas, M. Tatarakis, N. A Papadogiannis
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- [E89]. 'Elucidating the two and three-body fragmentation channels on isotopically labelled nitrous oxide by a two color asymmetric laser field'
N. Kotsina, S. Kaziannis, C. Kosmidis
Chem. Phys. Lett. 97, 651 (2016)
- [E90]. "Experimental implementation of a strong two-color asymmetric laser field in the mid-infrared"
S. Kaziannis, N. Kotsina, S. Danakas, C. Kosmidis
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