

## Demetrios Anglos

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### 1. Field of specialization

Laser spectroscopic techniques in materials analytical – Applications in Cultural Heritage

Molecular and nanoparticle photophysics and photochemistry – Sensing applications

### 2. Professional affiliations

Associate Professor	Department of Chemistry, University of Crete	09/2009- present
Principal Researcher	IESL-FORTH	04/2005-09/2009
Associate Researcher	IESL-FORTH	11/2001-present
Technical Manager	Ultraviolet Laser Facility, IESL-FORTH	3/2001-present
Research Scientist	IESL-FORTH	1999-2001
Post-doctoral Res. Fellow	IESL-FORTH	1995-1999
Graduate Res. Assistant	Department of Chemistry, Cornell University	1989-1993
Teaching Assistant	Department of Chemistry, Cornell University	1986-1989

### 3. Academic training

PhD	Physical Chemistry, Cornell University, USA	1989-1994
	Thesis: Photoinduced intrapeptide electron transfer involving novel donor and acceptor amino acids: A triplet state approach	
MSc	Physical Chemistry, Cornell University, USA	1986-1989
BSc	Chemistry, University of Athens, Greece	1980-1985

### 4. Academic record

75 articles in peer-reviewed scientific journals (3 invited)

33 articles in international conference proceedings

Co-author of one (1) book and contributor of special chapters in 4 books

Scientist-in-charge for 11 national and EC funded research projects (total budget : 1 200 000 €)

18 invited talks in international conferences

### 5. Teaching

Associate Professor	Department of Chemistry, Univ. of Crete	09/2009- present
	<u>Undergraduate</u> : Physical Chemistry I (Spectroscopy, 3 <sup>rd</sup> semester), Physical Chemistry Lab. I (3 <sup>rd</sup> semester), Advanced Laser Laboratory (8 <sup>th</sup> semester)	
	<u>Graduate</u> : Laser Spectroscopy	
Visiting Assoc. Professor	Department of Chemistry, Univ. of Crete	2008 - 2009
	Supervisor in 5 PhD and 7 MSc theses	2000 – present
Visiting Assist. Professor	Science Department, Technol. Educ. Institute of Crete	1998 - 2001
Teaching Assistant	Department of Chemistry, Cornell University (USA)	08/1986-06/1989

**6. Areas of research**

Laser-based spectroscopic techniques for materials analysis and diagnostics.

- Laser Induced Fluorescence (LIF), Laser Induced Breakdown Spectroscopy (LIBS), Raman spectroscopy. Applications in cultural heritage science and archaeology.
- Development and integration of compact portable instrumentation for field applications. Novel optical schemes for LIBS and hybrid LIBS-LIF, LIBS-Raman and LIBS-MS analysis.
- Femtosecond LIBS. Remote LIBS with femtosecond laser filaments.
- Optical emission spectrometry for probing of pulsed laser deposition. Diamond-like carbon, zinc oxide.

Photophysical and photochemical processes in solid matrices.

- Random laser action in composite materials. Dye-polymer-scatterer systems and inorganic-organic nanocomposite materials.
- Photophysics of nanostructured materials (ZnO, carbon dots).
- Laser ablation of molecular substrates (doped polymer systems, composite materials).

**7. Funded Research Projects**Project co-ordinator/principal investigator

- "On-line optimization of solar collector panel production - SUNLASER"  
ΣΥΝΕΡΓΑΣΙΑ (GSRT, Greece, 102 000 €) 2011-2013
- "Carbon-dots : Novel nano-materials for sensing applications – C-DOTS"  
KA-3047 (University of Crete, Greece, 12 400 €) 2010-2011
- "Cultural Heritage Advanced Research Infrastructures: Synergy for a Multidisciplinary Approach to Conservation/Restoration - CHARISMA"  
FP7-Infrastructures-Grant agreement No: 228330 (EC, 320 000 €) 2009-2013
- "The flower color message: Study and exploitation of pigments from wild flowers in Greece"  
ΠΕΝΕΔ 03ΕΔ 174 (GSRT, Greece, 53 609 €) 2006-2008
- "Characterization of archaeological copper-tin alloys with laser-based techniques"  
Greece-France Joint Research and Technology Prog. (GSRT, Greece, 12 400 €) 2006-2008
- "Development of laser systems for monitoring environmental contaminants and their influence on the surface of monuments"  
Greece-China Joint Research and Technology Prog. (GSRT, Greece, 11 740 €) 2005-2007
- "Advanced Training in Laser Sciences - ATLAS" Marie Curie Host Fellowships - Early Stage Training  
Project No FP6-MEST-CT-2004-008048 (EU, 450 000 €) 2004-2008
- "European Site for Ultrashort Lasers Novel Materials and Structures" Marie Curie Training Site  
IHP, Project No FP5-HPMT-CT-2000-00177 (EU, 228 000 €) 2001-2004
- "Transportable LIBS Prototype Instrument for the Analysis of Archaeological Samples-Phase3"  
(INSTAP, USA, 74 400 USD) 2001-2002
- "Development and Optimization of a Transportable LIBS Prototype Instrument for the Analysis of Archaeological Samples-Phase2"  
(INSTAP, USA, 50 100 USD) 2000
- "Development of a LIBS Prototype Instrument for the Analysis of Archaeological Samples-Phase 1"  
(INSTAP, USA, 49 600 USD) 1999
- "Interactions of water-soluble porphyrins with biopolymers. New photosensitisers in photodynamic therapy"  
Greece-Czech Republic Research and Technology Prog. (GSRT, Greece, 3 600 000 GDR) 1999-2001

"Laser Spectroscopic Techniques in Artwork Diagnostics"  
Greece-Britain Research and Technology Prog. (GSRT, Greece, 4 000 000 GDR) 1998-2000

Participation in funded projects (on the research team):

- "Integrated European Laser Laboratories – LASERLAB EUROPE-II"  
FP7-Infrastructures-Grant agreement No: 228334 (EC, 808 390 €) 2009-2013
- "Integrated European Laser Laboratories – LASERLAB EUROPE" Integrated Infrastructure Initiative  
FP7-Infrastructures-Grant agreement No: 228334 - (EC, 98 000 €) 2008
- "Ανάπτυξη ναοδομημένων υβριδικών υλικών πολυμερούς/ανοργάνου για εφαρμογές random lasing"  
ΠΙΕΝΕΔ 03ΕΔ 816 (GSRT, Greece, 131000 €) 2006-2008
- "Integrated European Laser Laboratories – LASERLAB EUROPE" Integrated Infrastructure Initiative  
Project No FP6-RII3-CT-2003-506350 (EC, 850 588 €) 2004-2007
- "A Scientific Training for High Education Initiatives in Art Conservation - ATHENA" Marie Curie  
Host Fellowships - Early Stage Training  
Project No FP6-MEST-CT-2004-504067 (EC, 309 432 €) 2004-2007
- "Innovative scientific approaches for monitoring and conservation of ancient metallic artefacts of  
Mediterranean basin - PROMET" STREP-INCOMED  
Project No FP6-INCO-CT-2004-509126 (EC, 646 452 €) 2004-2007
- "Lasers in Stonework Restoration"  
EIIET Programme, Project No Π14 (GSRT, Greece, 351 057 €) 2003-2005
- "Random Lasers based on Polymer nanocomposites" (EOARD, USA, 24 995 USD) 2001-2003
- "Nanocomposite Random Lasers" (EOARD, USA, 24 800 USD) 2000-2001
- "Laser Restoration of Painted Artworks: Effects and Methodology "  
ΠΙΕΝΕΔ Programme, Project No 99ΕΔ6 (GSRT, Greece) 2000-2001
- "Modelling and diagnostics of pulsed laser-solid interactions: application to laser cleaning"  
TMR, Project No ERB-FMRX-CT98-0188 (EC) 1999-2002
- "On-line sensing for integrated monitoring of the reactions and processes in industrial scale  
metallurgical mineral processing furnaces" Application of CARS in temperature and species  
concentration measurements in flame environments  
BRITE-EURAM, Project No BE96-3804 (EC) 1997-1999
- "Laser Technology in the Conservation of Artworks"  
EIIET II Programme, Project No 640 (GSRT, Greece) 1995-1997

## **8. Conference talks, Lectures, Seminars**

Conference invited talks

- "Lasers in cultural heritage. Analysis, Diagnostic, Conservation"  
Invited talk, 6<sup>th</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy  
(EMSLIBS 2011), Cesme, Izmir, Turkey, (11-15 September 2011)
- "Cultural Heritage Materials Analysis by LIBS"  
Invited talk, Matter and Materials in/for Cultural Heritage (MATCONS 2011), Craiova, Romania (24-  
28 August 2011)
- "Lasers in Search of our Past. A Bright Future"  
Special lecture, 3<sup>rd</sup> International Conference 'From Nanoparticle and Nanomaterials to Nanodevices  
and Nanosystems (IC4N-2011), Hersonnisos, Crete, Greece (26-29 June 2011)
- "Lasers Spectroscopies in Cultural Heritage"  
Invited talk, 30<sup>th</sup> European Congress on Molecular Spectroscopy (EUCMOS 2010)  
Florence, Italy (29 August - 03 September 2010)
- "Lasers in Art and Archaeology "

Invited talk, Humboldt Conference, Interdisciplinary Studies on Balkan Cultural Heritage  
Sofia, Bulgaria (19-22 November 2009)

"Lasers in Cultural Heritage. Analysis, Diagnosis, Conservation"

Invited talk, 7<sup>th</sup> International Conference on Laser Applications, (ICLA-2009)  
Cairo Egypt (17-21 May 2009)

"Mobile LIBS in art and archaeology. How far can we get? "

Invited talk, 60<sup>th</sup> Pittsburgh conference on Analytical Chemistry and Applied Spectroscopy  
(PITTCON 2009), Chicago, USA (8-13 March 2009)

"LIBS in search of our past. Is there a future?"

Invited talk, 5<sup>th</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications  
(LIBS 2008), Berlin, Germany (22-25 September 2008)

"Double pulse femtosecond LIBS"

Invited talk, European Materials Research Society Spring Meeting (E-MRS 2008), Strasbourg,  
France, (26-30 May 2008).

"Laser analytical tools in archaeological and conservation science. Challenges and prospects"

Invited talk, Euro-AnalysisXIV, Antwerp, Belgium, (9-14 September 2007).

"LIBS on the road. Touring museums and archaeological sites"

Invited talk, 4<sup>th</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy  
(EMSLIBS 2007), Paris, France, (10-13 September 2007).

"LIBS analysis of materials with ultrashort laser pulses"

Invited talk (Session ANYL#12-753), 5<sup>th</sup> International Chemical Congress of Pacific Basin Societies,  
PACIFICHEM 2005, Honolulu, Hawaii, USA (15-20 December 2005).

"Femtosecond LIBS. Prospects for cultural heritage applications"

Invited talk, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI,  
Vienna, Austria, (21-25 September 2005).

"Femtosecond lasers: Diagnostics and Conservation applications in art and archaeology"

Invited talk, Conference on Lasers and Electro-optics – CLEO/Europe 2005, Munich, Germany (12-  
17 June 2005).

"Prospects for control of optical emission in femtosecond LIBS measurements with optimized laser pulses"

Invited talk, 3<sup>rd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications  
(LIBS 2004), Malaga, Spain (28 September - 1 October 2004).

"Lasers in the conservation of paintings. Photochemical processes and implications"

Invited talk, 2<sup>nd</sup> Mediterranean Meeting on Photochemistry (MMP2), Giardini Naxos, Italy (28-June –  
2 July 2003).

"Photons for Art's Sake"

Invited talk, 9<sup>th</sup> International Conference on Multiphoton Processes (ICOMP IX), Elounda, Crete,  
Greece, (18-23 October 2002).

"Laser induced breakdown spectroscopy: A new analytical tool in art conservation and archaeology"

Invited talk, "1st International Conference on Laser Induced Plasma Spectroscopy and Applications -  
LIBS 2000" Pisa, Italy (8-12 October 2000).

#### Invited lectures and seminars

"Spectroscopy tools for probing materials and processes "

Invited lecture (2 hours), Quimilaser 2011, Intensive graduate course on Laser Chemistry, Univ. of  
Valladolid, Valladolid, Spain (20 January 2011)

"LIBS: new technique for analysis of cultural heritage materials"

Invited lecture in NKF Educational Seminar "Analyze this!" National Board of Antiquities, Helsinki,  
Finland (16-18 February 2009).

"Lasers in art and archaeology. Analysis, diagnostics and conservation "

Invited lecture in RER/1/006 Seminar "Nuclear techniques in cultural heritage preservation" NCSR-  
Demokritos, Athens, Greece (20-22 October 2008).

"Mobile laser instruments for analytical applications in art and archaeology "

Invited lecture (2 hours) in Summer Course on "Applications of lasers in the conservation of cultural objects" Department of Analytical Chemistry, University of Malaga, Spain (14 -18 July 2008).

"Laser techniques in cultural heritage. Study and conservation"

Invited lecture, Mini-Symposium on Laser Ablation (The Rank Prize Funds) Grasmere, UK (26-29 July 2004)

"Photons for the shake of cultural heritage"

Invited lecture, 5<sup>th</sup> Meeting of the Spanish Network on Cultural Heritage "Techniques for the Analysis and Diagnosis of Cultural Heritage, Madrid, Spain, (27 May 2004)

"Modern laser techniques in art and archaeology"

Invited lectures (3 hours), Dept. of Analytical Chemistry, University of Malaga, Spain (14 May 2001)

"Basic photophysical and photochemical processes in molecules and materials"

Invited seminar, Department of Chemistry, University of Ioannina, Greece (14 January 1999).

#### Conference contributed talks

"LIBS in Art and Archaeology. Achievements and Challenges"

Oral presentation (O58), Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (TECHNART 2011), Berlin, Germany, (25-28 April 2011).

"Random Laser Action in ZnO Nanohybrids"

Oral presentation, 7<sup>th</sup> International Conference on Laser Applications, Cairo Egypt (17-21 May 2009).

"Carbon-based nanostructured composite films"

Oral presentation, European Materials Research Society Spring Meeting (E-MRS 2008), Strasbourg, France, (26-30 May 2008).

"LIBS in art conservation and archaeology. Applications and Prospects"

Oral presentation (O5), Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (TECHNART 2007), Lisbon, Portugal, (25-28 April 2007).

"Random laser action from ZnO nanocrystals embedded in organic polymer or inorganic matrices"

(Session MATL#117-504), 5<sup>th</sup> International Chemical Congress of Pacific Basin Societies, PACIFICHEM 2005, Honolulu, Hawaii, USA (15-20 December 2005).

"Laser spectroscopic techniques in art and archaeology"

Oral presentation (107), 4<sup>th</sup> International Conference on Instrumental Methods of Analysis, Modern trends and Applications (IMA'05), Heraklion, Greece, (2-6 October 2005).

"Studies of ultraviolet femtosecond filaments in LIBS analysis of solids"

Oral presentation, 3<sup>rd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS 2005), Aachen, Germany, (6-9 September 2005).

"Comparison of the optical emission from confined plumes for short and ultra-short pulsed laser ablation of C-Ni mixture targets"

Oral presentation, 3<sup>rd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS 2005), Aachen, Germany, (6-9 September 2005).

"Femtosecond laser filaments enable remote LIBS analysis with potential applications in the monitoring of sculpture and monuments "

Oral presentation, European Materials Research Society Spring Meeting (E-MRS 2005), Strasbourg, France, (31 May – 3 June 2005).

"Laser analytical techniques in art and archaeology "

Oral presentation O01, 13<sup>th</sup> Conference of the Hellenic Scientific Society of Lasers and Electrooptics, Athens, Greece (15 October 2004).

"Random laser action from zinc oxide nanocrystals embedded in organic polymer or inorganic sol-gel matrices"

Oral presentation N-II.4, European Materials Research Society Spring Meeting (E-MRS 2004), Strasbourg, France, (24-28 May 2004).

"LM<sup>NTI</sup>, a new transportable LIBS instrument for fast elemental analysis of archaeological objects"

Oral presentation O79, 4<sup>th</sup> Symposium on Archaeometry, Athens, Greece (28-31 May 2003).

"LIBS : A new tool in Archeaometry?"

Oral presentation ThA3-1, 2nd International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2002), Orlando, USA (25-28 September 2002).

"Analytical applications of laser induced breakdown spectroscopy in art conservation and archaeology"  
Oral presentation O-29, 6<sup>th</sup> International conference on laser ablation-COLA'01, Tsukuba, Japan (1-5 October 2001).

"Chemical and structural modifications in the UV laser ablation of polymers. Implications for the laser cleaning of molecular substrates"  
Oral presentation O-30, 6<sup>th</sup> International conference on laser ablation-COLA'01, Tsukuba, Japan (1-5 October 2001).

"Photochemical effects in the UV ablation of polymers. Implications for the laser cleaning of molecular substrates"  
Oral presentation CMI5 Conference on Lasers and Electro-optics – CLEO/Europe 2000 Nice, France (10-15 September 2000).

"Laser induced breakdown spectroscopy in pigment analysis"  
Oral presentation, 7<sup>th</sup> Panhellenic conference of Physics, Heraklion, Greece (April 1996).

#### Other lectures, department seminars

"LIBS as a handy tool in conservation science and practice "  
Lecture and Instrument demonstration in Training workshop in Matter and Materials in/for Cultural Heritage (MATCONS 2011), Craiova, Romania (22-23 August 2011)

"LIBS (laser induced breakdown spectroscopy). In situ analysis of cultural heritage objects"  
Lecture and Instrument demonstration in Training workshop on Spectroscopic Techniques for Cultural Heritage organized within the CHARISMA project, Ravenna, Italy (27-29 June 2010)

"The use of lasers in art and archaeological research"  
Seminar, Conservation Science Department, Buffalo State College (13 March 2009).

"Atomic and Molecular Spectroscopies in Art and Archaeology"  
Seminar, Department of Chemistry, University of Crete, Greece (23 November 2007).

"Laser spectroscopic techniques. Prospects of using LIBS in geoscience"  
Lecture in the "Nanogeoscience" Symposium of the 11<sup>th</sup> International Conference of the Geological Society of Greece, Athens, Greece (26 May 2007).

"New insights in LIBS. Instrumentation and Fs DP-LIBS"  
Lecture in "Symposium for the 65<sup>th</sup> birthday of Prof. Robert J. Donovan", Heraklion, Greece (20 October 2006).

"Ultrafast lasers in the analysis of materials"  
Colloquium, IESL-FORTH, Heraklion, Greece (22 March 2005).

"Laser analytical techniques in art and archaeology. LIBS and LIF"  
Lecture in Training workshop 'Lasers in the preservation of cultural heritage' organized within the ATHENA Marie Curie Early Stage Training Project, Heraklion, Greece (2-7 February 2005).

"Laser techniques for cultural heritage conservation and study"  
Lectures (3 hours), 38<sup>th</sup> Course of the International School of Quantum Electronics "Theoretical and Practical Course on Spectroscopic Techniques for Materials, Environment and Cultural Heritage", Erice, Italy (5-15 July 2003).

"Photochemistry under extreme irradiation conditions"  
Colloquium, IESL-FORTH, Heraklion, Greece (15 March 2001).

"Photoinduced intramolecular electron transfer in peptides. The role of the excited state spin multiplicity"  
Seminar, Department of Chemistry, University of Crete, Greece (12 June 1999).

"Modern laser spectroscopic techniques in artwork diagnostics"  
Lectures (3 hours) in "Laser Technology in Art Conservation" workshop, Lisbon, Portugal (16-20 November 1998).

**9. Conference Organization**

Co-chair (organizer), Non-destructive and Microanalytical Techniques in Art and Cultural Heritage (TECHNART 2009), Athens, Greece (27-30 April 2009).

Vice-chair, 3<sup>rd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS 2005), Aachen, Germany (6 - 9 September 2005).

Chairman (organizer), 2<sup>nd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS II), Heraklion, Greece (30 September – 3 October 2003).

Local Organizing Committee: 7<sup>th</sup> International Symposium on Laser Ablation (COLA'03), Heraklion, Greece (5-10 October 2003).

**10. Conference Committees**

Program Committee, 6<sup>th</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS 2011), Izmir, Turkey (11 - 15 September 2011)

International Scientific Committee, Non-destructive and Microanalytical Techniques in Art and Cultural Heritage (TECHNART 2011), Berlin, Germany (26-30 April 2011)

Program Committee, 6<sup>th</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2010), Memphis, TN, USA (22-25 September 2010)

Program Committee, 5<sup>th</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2008), Berlin, Germany (22-25 September 2008)

Scientific Committee, New Frontiers in Micro and Nano Photonics, Florence, Italy (23-26 April 2008).

International Scientific Committee, 1<sup>st</sup> North-American Conference on Laser Induced Plasma Spectroscopy (NASLIBS 2007), New Orleans, LA, USA (8-10 October 2007).

Program Committee, 4<sup>th</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2006), Montreal, Canada (4-8 September 2006).

Scientific Committee, Heritage, Weathering and Conservation Conference (HWC 2006), Madrid, Spain, (21-24 June 2006).

Program Committee, 3<sup>rd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2004), Malaga, Spain (28 September – 1 October 2004).

Program Committee, 2<sup>nd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2002), Orlando, USA (25-28 September 2002).

**11. Course / Workshop Organization**

Special workshop on “Chemical Dynamics”, ATLAS Marie Curie EST project (organizer)  
Heraklion, Greece, 16-20 October 2006

European Campaign “Fascination of Light” – Science and Technology Week  
(EU, FP6-IST 035053, 12 000 €) Athens, Greece, 28 June-5 July 2006

"Laser Technology in Art Conservation" Lisbon, Portugal, 16-20 November 1998 (organization team)  
Raphael Programme (EU-DGX, 30 000 €) 1998

**12. Fellowships/ Student awards**

FORTH post-doctoral fellowship	1995-1999
Fulbright-Hays Grant, graduate fellowship	1986-1991
Hellenic Foundation of Scholarships, undergraduate award for top performance	1980-1984

### ***13. Other academic activities***

Referee for Scientific Journals

Analytical Bioanalytical Chemistry, Analytical Chemistry, Analytica Chimica Acta, Applied Geochemistry, Applied Optics, Applied Physics A, Applied Spectroscopy, Applied Surface Science, Chemical Society Reviews, European Physical Journal D, Journal of Analytical Atomic Spectrometry, Journal of Applied Physics, Journal of Archaeological Science, Journal of Physics D: Applied Physics, Journal of the Optical Society of America B, Physical Chemistry Chemical Physics, Spectrochimica Acta B, Surface and Coating Technology.

### ***14. Scientific / professional societies***

EURO-LIBS National representative in the Advisory Board of the European Council for LIBS Research, Development and Applications (since 10/2000 2003)

American Chemical Society (since 1987)

European Photochemistry Association (since 1998)

Association of Greek Chemists (since 1981)

### ***15. Non-professional associations***

International Students Programming Board, Cornell University; member of the board 1988-1989

Hellenic Students' Association, Cornell University; Treasurer (1987-88), Chair (1988-1992)

### ***16. Personal***

Date of birth : 5 November 1962

Family status : Married to Maria Kapsokefalou (PhD), three children.

Military service : 3/1994 - 3/1995

## 17. List of Publications

### Invited articles (peer reviewed)

1. "Laser Spectroscopic and Optical Imaging Techniques in Chemical and Structural Diagnostics of Painted Artwork" D. Anglos, C. Balas, C. Fotakis, *American Laboratory* **31**, 60-67 (1999).
2. "Laser-Induced Breakdown Spectroscopy in Art and Archaeology" D. Anglos Focal Point article in *Appl. Spectrosc.* **55**, 186A-205A (2001).
3. "Lasers in the analysis of cultural heritage materials " D. Anglos, S. Georgiou, C. Fotakis, *Journal of Nano Research* **8**, 47-60 (2009)
4. "Laser spectroscopies for elemental and molecular analysis in art and archaeology" A. Nevin, G. Spoto, D. Anglos, *Appl. Phys. A* **106**, 339-361 (2012); doi: 10.1007/s00339-011-6699-z

### Articles in scientific journals (peer reviewed)

1. "Long-Range Electronic Interactions in Peptides: The Remote Heavy Atom Effect"; G. Basu, M. Kubasik, D. Anglos, B. Secor and A. Kuki; *J. Am. Chem. Soc.* **112**, 9410-11 (1990); doi: [10.1021/ja00181a062](https://doi.org/10.1021/ja00181a062)
2. "Friedel-Crafts Approach to Electron-Deficient Cyclic  $\alpha$ -Amino Acids"; S. Kotha, D. Anglos and A. Kuki; *Tetrahedron Lett.* **33**, 1569-72 (1992).
3. "Fluorescence Quenching in a Strongly Helical Peptide Series: The Role of Non-Covalent Pathways in Modulating Electronic Interactions"; G. Basu, D. Anglos and A. Kuki; *Biochemistry* **32**, 3067-76 (1993); doi: [10.1021/bi00063a018](https://doi.org/10.1021/bi00063a018)
4. "Spin Forbidden Excitation Transfer and Heavy-Atom Induced Intersystem Crossing in Linear and Cyclic Peptides"; G. Basu, M. Kubasik, D. Anglos and A. Kuki; *J. Phys. Chem.* **97**, 3956-67 (1993); doi: [10.1021/j100118a006](https://doi.org/10.1021/j100118a006)
5. "Photoinduced Electron Transfer and Long-Lived Charge Separation in Rigid Peptide Architectures"; D. Anglos, V. Bindra and A. Kuki; *J. Chem. Soc., Chem. Commun.* 213-5 (1994); doi: 10.1039/C39940000213
6. "Laser Induced Fluorescence in Artwork Diagnostics. An Application in Pigment Analysis" D. Anglos, M. Solomidou, I. Zergioti, V. Zafiropulos, T.G. Papazoglou and C. Fotakis, *Appl. Spectrosc.* **50**, 1331-4 (1996).
7. "Laser Diagnostics of Painted Artworks : Laser Induced Breakdown Spectroscopy in Pigment Identification" D. Anglos, S. Couris and C. Fotakis, *Appl. Spectrosc.* **51**, 1025-30 (1997).
8. "Synthesis of a Novel  $\alpha$ -Amino Acid with Quinoxaline Side Chain: 7-Amino-6,7-dihydro-8H-cyclopenta[g]quinoxaline-7-carboxylic Acid" S. Kotha, E. Brahmachary, A. Kuki, K. Lang, D. Anglos, B. Singaram, *Tetrahedron Lett.* **38**, 9031-4 (1997).
9. "Excimer Laser Restoration of Painted Artworks: Procedures, Mechanisms and Effects" S. Georgiou, V. Zafiropulos, D. Anglos, C. Balas, V. Tornari and C. Fotakis, *Appl. Surf. Sci.* **127-129**, 738-45 (1998); doi: [10.1016/S0169-4332\(97\)00734-4](https://doi.org/10.1016/S0169-4332(97)00734-4)
10. "Corneal Hydration Monitoring by means of Laser-Induced Breakdown Spectroscopy" I. G. Pallikaris, H. S. Ginis, G. A. Kounis, D. Anglos, T. G. Papazoglou, L.P. Naoumidis, *J. Refr. Surgery* **14**, 655-60 (1998).
11. "Photochemical Effects in the UV Laser Ablation of Polymers: Implications for Laser Restoration of Artworks"; M. Lassithiotaki, A. Athanassiou, D. Anglos, S. Georgiou and C. Fotakis; *Appl. Phys. A* **69** (rapid communication), 363-7 (1999); doi: 10.1007/s003390051015
12. "Investigation of the laserlike behavior of polymeric scattering gain media under subpicosecond laser excitation" G. Zacharakis, G. Heliotis, G. Philippidis, D. Anglos and T. G. Papazoglou, *Appl. Optics* **38**, 6087-92 (1999).
13. "Photochemical Modifications in the UV Laser Ablation of Halonaphthalene Doped PMMA"; A. Athanassiou, E. Andreou, D. Anglos, S. Georgiou and C. Fotakis; *Appl. Phys. A. [Suppl.]* S285-9 (1999).
14. "Pigment Identification. A Dual Analytical Approach employing Laser Induced Breakdown Spectroscopy (LIBS) and Raman Microscopy. "L. Burgio, R. J. H. Clark, T. Stratoudaki, D. Anglos, M. Doulgieridis, *Appl. Spectrosc.* 463-9 (2000).
15. "A Comparative Study of the Photochemical Modifications Effected in the UV Laser Ablation of Doped Polymer Substrates"; A. Athanassiou, M. Lassithiotaki, D. Anglos, S. Georgiou and C. Fotakis; *Appl. Surf. Sci.* **154/155**, 89-94 (2000); doi: [10.1016/S0169-4332\(99\)00380-3](https://doi.org/10.1016/S0169-4332(99)00380-3)

16. "Analysis of Pigments in Polychromes by use of Laser Induced Breakdown Spectroscopy and Raman Microscopy." M. Castillejo, M. Martin, D. Silva, T. Stratoudaki, D. Anglos, L. Burgio, R. J. H. Clark, *J. Molec. Structure*. **550-551**, 191-8 (2000).
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25. "Assisted Interpretation of Laser-Induced Fluorescence Spectra of Egg-Based Binding Media Using Total Emission Fluorescence Spectroscopy" A. Nevin, D. Anglos, *Laser Chemistry*, Article 82823 (1-5) (2006).
26. "LIBS as an identification and documentation tool in the conservation process: applications at the W.D.E. Coulson Conservation Laboratory, INSTAP-SCEC" S. Chlouveraki, K. Melessanaki, D. Anglos, in *Strategies for Saving our Cultural Heritage*, Proceedings of the International Conference on Conservation Strategies for Saving Indoors Metallic Collections (CSSIM), Cairo, Egypt (25 February – 1 March 2007), V. Argyropoulos, A. Hein, M. A. Harith (eds) pp.46-52, TEI of Athens 2007.
27. "Evaluating the Effectiveness of Lasers for the Removal of Overpaint from a 20th C Minimalist Painting" C. McGlinchey, C. Stringari, E. Pratt, M. Abraham, K. Melessanaki, V. Zafirooulos, D. Anglos, P. Pouli, C. Fotakis, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI Proceedings, Vienna, Austria, (21-25 September 2005) Springer Proceedings in Physics **116**, 209-215, J. Nimmrichter; W. Kautek, M. Schreiner (Eds.) 2007.
28. "A parametric linear correlation method for the analysis of LIBS spectral data" E. Tzamali, D. Anglos, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI Proceedings, Vienna, Austria, (21-25 September 2005) Springer Proceedings in Physics **116**, 377-382, J. Nimmrichter; W. Kautek, M. Schreiner (Eds.) 2007.
29. "A novel approach on the combined *in-situ* application of LIBS and  $\mu$ -XRF spectrometers for the characterization of copper alloy corrosion products" V. Kantarelou, C. Zarkadas, A. Giakoumaki, M. Giannoulaki, A. G. Karydas, D. Anglos, V. Argyropoulos, *Metal 2007 Proceedings*, Amsterdam, The Netherlands (17-21 September 2007); *METAL-07*, Vol. 2, Innovative investigation of metal artifacts, 35-41 (2007)
30. "Developing Innovative Portable Diagnostic Techniques and Approaches for the Analysis of Metal Artefacts from Museum Collections", V. Argyropoulos, M. Giannoulaki, D. Anglos, P. Pouli, M. Abdel Harith, A. Elhassan, A.G. Karydas, Ch. Zarkadas, V. Kantarelou, A. Arafat, N. Haddad, 7<sup>th</sup> European Conference "SAUVEUR", Safeguarded Cultural Heritage, Understanding & Viability for the Enlarged Europe, Proceedings, 79-89, (2007)
31. "A systematic approach for the damage assessment of museum metals collections based on statistics and portable techniques: the case study of ancient Messene, Greece", M. Giannoulaki, V. Argyropoulos, T. Panou, G. Michalakakos, A.G. Karydas, V. Kantarelou, D. Anglos, A. Giakoumaki, V. Perdikatsis, C. Apostolaki, P. Themelis, S. Poulimenea" *ARCHAIA*, Case Studies on Research Planning, Characterisation, Conservation and Management of Archaeological Sites, N. Marchetti, I. Thuesen, Eds BAR International Series 1877, 121-129 (2008).
32. "Laser-Like Emission From Highly Scattering ZnONanoparticle Films" A. Stassinopoulos, E. D. Tsagarakis, R. N. Das, E. P. Giannelis, S. H. Anastasiadis, D. Anglos, 7<sup>th</sup> International Conference on laser Applications-ICLA2009, Cairo, Egypt 17-21/05/2009 in AIP Conference Proceedings Vol. **1172**, 44-48, M. A. Harith (Ed) 2009.
33. "Semi Quantitative Analysis of Euro Coins Via Femtosecond LIBS Technique" A. Elhassan, A. Giakoumaki, D. Anglos, M. A. Harith, 7<sup>th</sup> International Conference on laser Applications-ICLA2009, Cairo, Egypt 17-21/05/2009 in AIP Conference Proceedings Vol. **1172**, 81-84, M. A. Harith (Ed) 2009.

**Other conference presentations**

1. "Radical ion-pair accumulation upon photoexcitation of a rigid cyclic dipeptide" D. Anglos, A. Kuki, B. Li, K. S. Peters, Poster presentation, 3<sup>rd</sup> International conference on Photoinduced Charge Transfer, Rochester, NY, USA (July 1993).
2. "Artwork Diagnostics. Laser Induced Breakdown Spectroscopy (LIBS) and Laser Induced Fluorescence (LIF)" D. Anglos, S. Couris, A. Mavromanolakis, I. Zergioti, M. Solomidou, W.-Q. Liu, T. G. Papazoglou, V. Zafiropoulos, C. Fotakis, M. Doulgeridis, A. Fostiridou; Poster presentation, 1<sup>st</sup> International Conference on Lasers in the Conservation of Artworks-LACONA I, Heraklion, Greece, (4-6 October 1995).
3. "Spectroscopic Estimation of the Hydration of Corneal Models under Laser Irradiation", I. G. Pallikaris, D. Anglos, T. G. Papazoglou, H. S. Ginis, G. A. Kounis, L. P. Naoumidis, *Investigative Ophthalmology and Visual Science* **38**, Abstract 2482-B172, (1997), The Association for Research in Vision and Ophthalmology, Annual Meeting, Florida, USA (1997).
4. "Photochemical effects in the UV laser cleaning of model molecular substrates ", M. Lassithiotaki, D. Anglos, S. Georgiou, C. Fotakis, Poster presentation, 5<sup>th</sup> International Conference on Optics within the Life Sciences-OWLS-V, Heraklion, Greece (13-16 October 1997).
5. "Laser Induced Breakdown Spectroscopy in the Analysis of Pigments in Painted Artworks. A database of pigments and spectra", T. Stratoudaki, D. Xenakis, V. Zafiropoulos and D. Anglos, Poster presentation, 5<sup>th</sup> International Conference on Optics within the Life Sciences-OWLS-V, Heraklion, Greece (13-16 October 1997).
6. "Application of Coherent Anti-Stokes Raman (CARS) spectroscopy in temperature measurements in flame environment ", A. Hatziapostolou, S. Couris, I. Palli, D. Anglos, Poster presentation, 2<sup>nd</sup> Chemistry and Industry conference, Athens, Greece (December 1998).
7. "Laser flash photolysis system for the kinetic absorption spectrophotometry of excited states and photochemical intermediates ", D. Anglos, C. Fotakis, Poster presentation, 2<sup>nd</sup> Chemistry and Industry conference, Athens, Greece (December 1998).
8. "Temporal and spectral effects of scatterers on sub-ps laser induced fluorescence of organic dyes", G. Zacharakis, D. Anglos, E. Vazgiouraki, T. G. Papazoglou,, Poster presentation CTuI99, CLEO/EUROPE-EQEC'98, Glasgow, U.K (14-18 September 1998).
9. "Deposition, Evaluation and Control of 4H and 6H SiC Epitaxial Layers for Device Applications ", E. Neyret, L. Di Cioccio, J. M. Bluet, J. Pernot, P. Vicente, D. Anglos, M. Lagadas and T. Billon, Oral presentation, Expert Evaluation & Control of Compound Semiconductor Materials & Technologies conference, Heraklion, Greece (21-24 May 2000).
10. "Pigment Identification. A Dual Analytical Approach employing Laser Induced Breakdown Spectroscopy (LIBS) and Raman Microscopy. " L. Burgio, R. J. H. Clark, T. Stratoudaki, D. Anglos, M. Doulgeridis, Poster presentation, 3rd International Conference on Lasers in the Conservation of Artworks-LACONA III, Florence, Italy, (26-29 April 1999).
11. "Laser Induced Breakdown Spectroscopy and Raman Microscopy for Analysis of Pigments in Polychromes" M. Castillejo, M. Martin, D. Silva, T. Stratoudaki, D. Anglos, L. Burgio, R. J. H. Clark, Poster presentation, 3rd International Conference on Lasers in the Conservation of Artworks-LACONA III, Florence, Italy, (26-29 April 1999).
12. "A Comparative Study of the Photochemical Modifications Effected in the UV Laser Ablation of Doped Polymer Substrates"; A. Athanassiou, M. Lassithiotaki, D. Anglos, S. Georgiou and C. Fotakis; Poster presentation, 5<sup>th</sup> International Conference on Laser Ablation-COLA'99, Goettingen, Germany, (19-23 July 1999).
13. "Laser Induced Breakdown Spectroscopy (LIBS) and Hyper-spectral Imaging Analysis of Pigments on an Illuminated Manuscript. K. Melesanaki, V. Papadakis, A. Tselikas, C. Balas, D. Anglos, Poster presentation, 1st International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2000) Pisa, Italy (8-12 October 2000).
14. "Characterization of encrustation on marble with laser induced breakdown spectroscopy". P. Maravelaki-Kalaitzaki, D. Anglos, V. Kilikoglou, V. Zafiropoulos, Poster presentation, 1st International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2000) Pisa, Italy (8-12 October 2000).

15. "Wavelength dependence of the photochemical modifications in the UV irradiation of doped polymers" A. Athanassiou, E. Andreou, D. Fragouli, D. Anglos, S. Georgiou, Poster PM-87 in 6<sup>th</sup> International conference on laser ablation-COLA'01, Tsukuba, Japan (1-5 October 2001).
16. "Adaptation of Laser induced Breakdown Spectroscopy for the Analysis of Archaeological Artifacts" S. Ferrence, K. Melessanaki, P. P. Betancourt, D. Anglos, Oral presentation, 9<sup>th</sup> International Aegean Conference (METRON), Yale, Univ. USA (18-21 April 2002).
17. "Dynamics of photoproduct formation in the UV laser ablation of doped polymers" G. Bounos, A. Athanassiou, D. Anglos, S. Georgiou, Poster presentation, 2002 Gordon Research Conference on Laser Interactions with Materials, Andover, NH, USA (21-26 July 2002).
18. "Application of LIBS in the analysis of archaeological objects" K. Melessanaki, S. C. Ferrence, P. P. Betancourt, D. Anglos, 19<sup>th</sup> Congress of the International Committee for Optics – ICO XIX, Florence, Italy (25-30 August 2002).
19. "Analysis of bronze age vitreous materials. Experience with a new LIBS instrument" K. Melessanaki, M. Panagiotaki, S. Chlouveraki, P. P. Betancourt, D. Anglos, Poster presentation, 2<sup>nd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications - LIBS 2002, Orlando, USA (25-28 September 2002).
20. "Laser analytical techniques in art and archaeology", D. Anglos, K. Melessanaki, Poster presentation, 19<sup>th</sup> Panhellenic Conference of Chemistry, Heraklion, Greece (6-11 November 2002).
21. "Random laser action in organic/inorganic polymer hybrids", K. Piperaki, A. Stassinopoulos, M. Psyllaki, G. Zacharakis, D. Anglos, S. H. Anastasiadis Poster presentation, 19<sup>th</sup> Panhellenic Conference on Solid State Physics Heraklion, Greece (15-18 November 2002).
22. "Non-sampling analysis of bronze age vitreous materials. Experience with a new LIBS instrument", K. Melessanaki, M. Panagiotaki, S. Chlouveraki, P. P. Betancourt, D. Anglos, Poster P103, 4<sup>th</sup> Symposium on Archaeometry, Athens, Greece (28-31 May 2003).
23. "Oriented or nanocrystalline ZnO layers grown by ns and subps lasers in combination with RF discharges" M. Jelinek, A. Klini, J. Lancok, M. Gernansky, V. Studnicka, J. Oswald, C. Fotakis, D. Anglos, R. Zeipl, F. Flory, L. Escoubas, 2<sup>nd</sup> International Conference on Materials for Advanced Technologies & IUMRS Singapore (29 June – 4 July 2003).
24. "The role of varnish in the stratigraphic analysis of painted artworks by LIBS", K. Melessanaki, A. Mastrogiannidou, D. Anglos, Poster presentation, Oral presentation, 5<sup>th</sup> International Conference Lasers in the Conservation of Artworks, Osnabrueck, Germany (15-18 September 2003).
25. "LMNTI: A transportable LIBS instrument for archaeometric analysis", K. Melessanaki, S. Chlouveraki, S.S. Ferrence, P.P. Betancourt, D. Anglos, Poster W-E24, 2<sup>nd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS II), Heraklion, Greece (30 September – 3 October 2003).
26. "A flexible fiber-optic LIBS probe for cultural heritage analysis", K. Melessanaki, A. Mastrogiannidou, C. Fotakis, D. Anglos, Poster W-E25, 2<sup>nd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS II), Heraklion, Greece (30 September – 3 October 2003).
27. "Fast quantitative determination of tin (Sn) in bronze objects by LIBS", K. Melessanaki, A. Mastrogiannidou, C. Fotakis, D. Anglos, Poster W-E26, 2<sup>nd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS II), Heraklion, Greece (30 September – 3 October 2003).
28. "Dual-pulse femtosecond laser induced breakdown spectroscopy", T. Witting, E. Bakarezos, D. Anglos, C. Kalpouzou, C. Fotakis, Poster presentation : 20.9, Spring Meeting, German Physical Society, Munich, Germany (22-26 March 2004).
29. "Light amplification of zinc oxide films and layered structures " A. Stassinopoulos, R. N. Das, E. P. Giannelis, S. H. Anastasiadis, D. Anglos, Poster presentation N/PIII.44, European Materials Research Society Spring Meeting (E-MRS 2004), Strasbourg, France, (24-28 May 2004).
30. "Zinc oxide films grown by nanosecond and sub-picosecond pulsed laser deposition " A. Klini, A. Manousaki, M. Androulaki, D. Anglos, C. Fotakis, D. Anglos, C. Fotakis, Poster presentation N/PI.47, European Materials Research Society Spring Meeting (E-MRS 2004), Strasbourg, France, (24-28 May 2004).
31. "Study of plume dynamics during the growth of ZnO thin films by ns and fs UV pulsed laser ablation" A. Klini, D. Anglos, C. Fotakis, Poster presentation, 2004 Gordon Research Conference on Laser Interactions with Materials, Andover, NH, USA (1-6 August 2004).

32. "Study of plume dynamics during the growth of ZnO thin films by ns and fs UV pulsed laser ablation" A. Klini, A. Manousaki, D. Anglos, Poster presentation P-30, 3<sup>rd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2004), Malaga, Spain (28 September - 1 October 2004).
33. "Dual-pulse femtosecond laser induced breakdown spectroscopy", T. Witting, E. Bakarezos, D. Anglos, C. Kalpouzos, C. Fotakis, Poster presentation P-45, 3<sup>rd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2004), Malaga, Spain (28 September - 1 October 2004).
34. "Measuring the thickness of protective coatings applied on historic metal objects using LIBS " P. Pouli, K. Melessanaki, A. Giakoumaki, E. Kanaki, V. Argyropoulos, D. Anglos, Poster presentation P-76, 3<sup>rd</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2004), Malaga, Spain (28 September - 1 October 2004).
35. "Laser-induced fluorescence analysis of protein-based binding media" A. Nevin, S. Cather, D. Anglos, C. Fotakis, Poster presentation CSI-1-WED, Conference on Lasers and Electro-optics – CLEO/Europe 2005, Munich, Germany (12-17 June 2005).
36. "Fiber-optic LIBS probe for cultural heritage analysis" S. von Olearius, K. Melessanaki, D. Anglos, Poster presentation CSI-4-WED, Conference on Lasers and Electro-optics – CLEO/Europe 2005, Munich, Germany (12-17 June 2005).
37. "Spectroscopic analysis using a hybrid LIBS-Raman system" A. Giakoumaki, I. Osticioli, D. Anglos, Poster presentation P-11, 3<sup>rd</sup> International Conference on the Application of Raman Spectroscopy in Art and Archaeology, Paris, France, (31 August - 3 September 2005).
38. "Spectroscopic analysis using a hybrid LIBS-Raman system" A. Giakoumaki, I. Osticioli, D. Anglos, Poster presentation P-14, 3<sup>rd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS 2005), Aachen, Germany, (6-9 September 2005).
39. "Time-resolved spectroscopic and imaging studies of plasma plumes generated by femtosecond laser filaments" T. Naberbaumer, D. Gray, S. Tzortzakis, D. Anglos, Poster presentation P-57, 3<sup>rd</sup> Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy (EMSLIBS 2005), Aachen, Germany, (6-9 September 2005).
40. "Laser-induced fluorescence analysis of protein-based binding media" A. Nevin, S. Cather, D. Anglos, C. Fotakis, Oral presentation, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI, Vienna, Austria, (21-25 September 2005).
41. "Classification of patinas found on surfaces of historical buildings by means of laser induced breakdown spectroscopy" C. Vasquez-Calvo, A. Giakoumaki, D. Anglos, M. Alvarez de Buergo, R. Fort, Poster presentation P-1, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI, Vienna, Austria, (21-25 September 2005).
42. "Spectra correlation in LIBS analysis of pigments" E. Tzamali, D. Anglos, Poster presentation P-3, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI, Vienna, Austria, (21-25 September 2005).
43. "Fiber-optic LIBS probe for cultural heritage analysis" S. von Olearius, K. Melessanaki, D. Anglos, Poster presentation P-7, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI, Vienna, Austria, (21-25 September 2005).
44. "Measuring the thickness of protective coatings applied on historic metal objects using LIBS " A. Giakoumaki, P. Pouli, K. Melessanaki, V. Argyropoulos, D. Anglos, Poster presentation P-57, 6<sup>th</sup> International Conference on Lasers in the Conservation of Artworks-LACONA VI, Vienna, Austria, (21-25 September 2005).
45. "Spectroscopic analysis using a hybrid LIBS-Raman system" A. Giakoumaki, I. Osticioli, D. Anglos, Poster presentation PII-79, 4<sup>th</sup> International Conference on Instrumental Methods of Analysis, Modern trends and Applications (IMA'05), Heraklion, Greece, (2-6 October 2005).
46. "Laser induced fluorescence of protein based binding media" A. Nevin, S. Cather, D. Anglos, C. Fotakis, Poster presentation PII-80, 4<sup>th</sup> International Conference on Instrumental Methods of Analysis, Modern trends and Applications (IMA'05), Heraklion, Greece, (2-6 October 2005).
47. "Nanosecond and Femtosecond LIBS Analysis of Simulated Artifact Bronze Alloys" A. Elhassan, A. Giakoumaki, D. Anglos, G.M. Ingo, L. Robbiola, M. A. Harith, Poster presentation (P-02) 4<sup>th</sup> International Conference on Laser Induced Plasma Spectroscopy and Applications (LIBS 2006), Montreal, Canada (4-8 September 2006).

48. "Spectroscopic analysis using a hybrid LIBS-Raman system" A. Giakoumaki, I. Osticioli, D. Anglos Poster presentation (P50), Heritage Weathering and Conservation 2006, Madrid, Spain (21-24 June 2007).
49. "Advances in the analysis of proteinaceous materials using spectrofluorimetry" A. Nevin, S. Cather, D. Anglos, Poster presentation (P83), Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (TECHNART 2007), Lisbon, Portugal, (25-28 April 2007).
50. "Novel applications of Raman spectroscopy for the discrimination of proteinaceous binding media" A. Nevin, I. Osticioli, D. Anglos, E. Castellucci, Poster presentation (P14), Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (TECHNART 2007), Lisbon, Portugal, (25-28 April 2007).
51. "Characterization of archaeological copper alloy artifacts by combined Micro-XRF and LIBS portable spectrometers" D. Anglos, A. Giakoumaki, V. Kantarelou, A.G. Karydas, D. Sokaras, Ch. Zarkadas, M. Giannoulaki and V. Argyropoulos, Poster presentation (P23), Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (TECHNART 2007), Lisbon, Portugal, (25-28 April 2007).
52. "Combined *in-situ* use of LIBS and micro-XRF spectrometers for the characterization of archaeological metal objects", A. Giakoumaki, V. Kantarelou, Ch. Zarkadas, M. Giannoulaki, A. G. Karydas D. Anglos, V. Argyropoulos, Poster presentation in "European Materials Research Society – Spring Meeting EMRS 2007" Strasbourg, France (28 May – 1 June 2007).
53. "Characterization of Iron Age pottery from Eastern Turkey by Laser Induced Breakdown Spectroscopy (LIBS) and Principal Component Analysis (PCA)" M. Castanys, A. Ü. Erdem, A. Giakoumaki, E. Kartsonaki, D. Anglos, C. Fotakis, , Poster Presentation in "European Materials Research Society – Spring Meeting EMRS 2007" Strasbourg, France (28 May – 1 June 2007).
54. "A new compact laser source for portable LIBS applications" J. Goujon, A. Giakoumaki, O. Musset, D. Anglos, E. Georgiou, , Oral presentation in "Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy -EMS-LIBS 2007", Paris, France (10-13 September 2007).
55. "Double-pulse femtosecond LIBS" V. Pinon, D. Anglos, Poster presentation in "Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy -EMS-LIBS 2007", Paris, France (10-13 September 2007).
56. "Quantitative analysis of bronze alloys via nano and femto second LIBS" A. Elhassan, A. Giakoumaki, L. Fornarini, D. Anglos, R. Fantoni, M. A. Harith, , Poster presentation in "Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy -EMS-LIBS 2007", Paris, France (10-13 September 2007).
57. "Qualitative and semi-quantitative analysis of Copper Alloys by LIBS and PCA" M. Castanys, A. Giakoumaki, A. Doridot, M. J. Soneira, L. Robbiola, D. Anglos, Poster presentation in "Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy -EMS-LIBS 2007", Paris, France (10-13 September 2007).
58. "Combined *in-situ* use of LIBS and micro-XRF spectrometers for the characterization of archaeological metal objects", A. Giakoumaki, V. Kantarelou, Ch. Zarkadas, M. Giannoulaki, A. G. Karydas, D. Anglos, V. Argyropoulos, Oral presentation in Lasers in the conservation of artworks – LACONA VII, Madrid, Spain (17-21 September 2007).
59. "LMNTII: A new portable LIBS instrument for cultural heritage applications", A. Giakoumaki, A. Petrakis, K. Hatzigiannakis, D. Anglos, Poster presentation in Lasers in the conservation of artworks – LACONA VII, Madrid, Spain (17-21 September 2007).
60. V. Kantarelou, Ch. Zarkadas, A. Giakoumaki, M. Giannoulaki, A. G. Karydas, D. Anglos, V. Argyropoulos, A novel approach on the combined *in-situ* application of LIBS and  $\mu$ -XRF spectrometers for the characterization of copper alloy corrosion products, Oral presentation in Metal 2007, Amsterdam, The Netherlands (17-21 September 2007).
61. "Random Laser Emission from ZnO Nanocomposite Hybrids", A. Stassinopoulos, S. H. Anastasiadis, D. Anglos, E. D. Tsagarakis, D. G. Papazoglou, R. N. Das, E. P. Giannelis, Oral presentation (X30.00009) in American Physical Society Meeting (2008 APS March Meeting), New Orleans, USA, (10-14 March 2008).
62. "Surface Functionalized Carbogenic Quantum Dots", A. Bourlinos, A. Stassinopoulos, D. Anglos, S. H. Anastasiadis, R. Zboril, M. Karakassides, E. P. Giannelis, Oral presentation (Y28.00007) in American Physical Society Meeting (2008 APS March Meeting), New Orleans, USA, (10-14 March 2008).
63. "Studies of plume optical emission following double pulse femtosecond laser ablation" V. Pinon, D. Anglos, Poster presentation in European Materials Research Society Spring Meeting (E-MRS 2008), Strasbourg, France, (26-30 May 2008).

64. "Random Laser Emission from ZnO Nanocomposite Hybrids", A. Stassinopoulos, S. H. Anastasiadis, D. Anglos, E. D. Tsagarakis, D. G. Papazoglou, R. N. Das, E. P. Giannelis, Poster presentation in European Materials Research Society Spring Meeting (E-MRS 2008), Strasbourg, France, (26-30 May 2008).
65. "Studies of double-pulse LIBS with femtosecond laser pulses", V. Pinon, D. Anglos Oral presentation in "Laser-Induced Breakdown Spectroscopy 2008" Berlin, Germany (22-26 September 2008).
66. "A survey over the capabilities of LIBS in the quantification of archaeological copper alloys", A. Giakoumaki, A. Doridot, L. Robbiola, D. Anglos Poster presentation in "Laser-Induced Breakdown Spectroscopy 2008" Berlin, Germany (22-26 September 2008).
67. "LMNTII: A new portable LIBS instrument for cultural heritage applications" A. Giakoumaki, K. Hatzigiannakis, A. Petrakis, D. Anglos, , Poster presentation in "Laser-Induced Breakdown Spectroscopy 2008" Berlin, Germany (22-26 September 2008).
68. "Characterisation of natural resins and waxes from archaeological and historical contexts" A. Spyros, E. Kartsonaki, D. Anglos, U. Knuutinen, Oral presentation (O55) in 5<sup>th</sup> Symposium of the Hellenic Archaeometry Society, Athens, Greece (8 – 10 October 2008).
69. "Towards non- and micro-destructive analysis in archaeological and conservation science" B. Derham, P. Westlake, D. Anglos, A. Sarris, R. Jones, Poster presentation (P56) in 5<sup>th</sup> Symposium of the Hellenic Archaeometry Society, Athens, Greece (8 – 10 October 2008).
70. "Development of micro-XRF applications for the characterization of the surface on museum metal artefacts", V. Kantarelou, A. G. Karydas, D. Sokaras, C. Zarkadas, V. Argyropoulos, M. Giannoulaki, C. Degriigny, S. Golfomitsou, L. Mahfood, M. Azar, A. Almansour, A. Arafat, A. Giakoumaki, D. Anglos, Poster presentation (P57) in 5<sup>th</sup> Symposium of the Hellenic Archaeometry Society, Athens, Greece (8 – 10 October 2008).
71. "A new portable LIBS system (LMNTII) in the analysis of cultural heritage objects" A. Giakoumaki, P. Siozos, K. Hatziyannakis, A. Petrakis, D. Anglos, Poster presentation (P37) in TECHNART2009 - Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Conference, Athens, Greece, (27 - 30 April 2009).
72. "Analytical studies of painted plaster based on LIBS and micro-Raman" P. Siozos, P. Westlake, R. Jones, B. Derham, D. Anglos, Poster Presentation (P33) in EMSLIBS2009 - 5<sup>th</sup> Euro Mediterranean Symposium on Laser Induced Spectroscopy, Tivoli Terme, Rome, Italy (28 September - 1 October 2009).
73. "Study of pigments and glazes on Byzantine pottery sherds (12-19<sup>th</sup> C AD)" P. Siozos, G. Kordatzaki, A. Yangaki , O. Gratziou, D. Anglos, Poster Presentation (P34) in EMSLIBS2009 - 5<sup>th</sup> Euro Mediterranean Symposium on Laser Induced Spectroscopy, Tivoli Terme, Rome, Italy (28 September - 1 October 2009).
74. "Laser Induced Break-Down Spectroscopy applied to Archeological Iron Samples" S. Koch, D. Anglos, W. Jahn, C. Johnk, M. Sohn, P. Siozos, U. Teubner, W. Neu , Oral presentation in TECHNART 2011 - Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (), Berlin, Germany, (25-28 April 2011).
75. "Studying pigments on painted plaster in Minoan, Roman and Byzantine Crete" P. Siozos, P. Westlake, A. Philippidis, Ch. Apostolaki, D. Anglos, V. Perdikatsis, B. Derham, R. Jones, Poster presentation in TECHNART 2011 - Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (), Berlin, Germany, (25-28 April 2011).
76. "Combined Laser-Induced Breakdown Spectroscopy, and Mass Spectrometry for the Analysis of Cultural Heritage Materials" O. Kokkinaki, C. Mihasan, M. Velegrakis, D. Anglos, , Poster presentation in TECHNART 2011 - Conference on Non-destructive and Microanalytical Techniques in Art and Cultural Heritage Research (), Berlin, Germany, (25-28 April 2011).