

LASER APPLICATIONS IN HERITAGE SCIENCE & CONSERVATION

LIST OF PUBLICATIONS

BOOKS

1. “*Lasers in the Preservation of Cultural Heritage; Principles and applications*”, Fotakis C., D. Anglos, V. Zafiropoulos, S. Georgiou, V. Tornari, Ed. R. G. W. Brown, E. R. Pike (Taylor and Francis, New York 2006).

INVITED CHAPTERS IN BOOKS

1. “Eastern Mediterranean perspectives on eco-conscious, resilient and sustainable preservation of museum collections and heritage sites in Greece”, V. Argyropoulos, D. Karolidis, P. Pouli, Chapter #22 in Krmpotich, C. and Stevenson, A. (eds). *Collections Management as Critical Museum Practice*. London: UCL Press, p. 427 (2024); doi.org/10.14324/111.9781800087040
2. “Laser Cleaning on Stonework: Principles, Case Studies, and Future Prospects”, P. Pouli, Invited Chapter; Springer Nature Switzerland AG, F. Gherardi, P. N. Maravelaki (eds.), *Conserving Stone Heritage, Cultural Heritage Science* (2022); https://doi.org/10.1007/978-3-030-82942-1_3
3. “Open-air Laser-induced Breakdown Spectroscopy (LIBS)”, I. Malegiannaki, D. Anglos, *Analytical Strategies for Cultural Heritage Materials and their Degradation*, 1, 45-74 (2021); doi.org/10.1039/9781788015974-00045
4. “Laser-induced breakdown spectroscopy in heritage science”, D. Anglos; in “*Chemical Analysis in Cultural Heritage*”, edited by L. Sabbatini, I. D. van der Werf, De Gruyter GmbH, Berlin, Chapter 4, pp. 77-98 (2020); <https://doi.org/10.1515/9783110457537>
5. “Laser-induced breakdown spectroscopy (LIBS) in cultural heritage”, D. Anglos, *Analytical Methods Committee AMCTB No. 91, Analytical Methods*, 11, 5833-5836 (2019); doi.org/10.1039/c9ay90147g
6. “Laser Cleaning”, P. Pouli, Invited chapter in *The Encyclopedia of Archaeological Sciences*, Sandra L. López Varela (Ed) (2018), <https://doi.org/10.1002/9781119188230.saseas0341>
7. “Laser Tools in Archaeology and Conservation. How Far Can We Get?” A. Philippidis, P. Siozos, Z.E. Papiiaka, K. Melessanaki, K. Hatzigiannakis, M. Vakondiou, G. Manganas, K. Diamanti, A. Giakoumaki, D. Anglos, Chapter in “*Best Practices of Geoinformatic Technologies for the Mapping of Archaeolandscape*” A. Sarris (Ed.), Archaeopress Publishing Ltd, Oxford, .pp. 261-269 (2015) <http://www.archaeopress.com/Public/displayProductDetail.asp?id={A29B6318-83A5-4B36-BF5B-50B1EFA29AB9}> ISBN 9781784911621
8. “Une technique prototype du nettoyage au laser pour les sculptures et les monuments de l’Acropole d’Athènes, Grèce”, P. Pouli, C. Fotakis, E. Papakonstantinou, K. Frantzikinaki, A. Panou, A. Frantzi, C. Vasiliadis *MONUMENTAL 2015 Semestriel 2, Dossier Arles*, p. 98-101 (in French) (2015)
9. “Cultural heritage applications of LIBS”, Demetrios Anglos and Vincent Detalle; Chapter in “*Laser-Induced Breakdown Spectroscopy – Theory and Applications*”, Springer Series in Optical Sciences vol. 182, Eds. S. Musazzi and U. Perini, (Springer-Verlag, Berlin Heidelberg 2014), pp. 531-553 (2014) <http://link.springer.com/book/10.1007%2F978-3-642-45085-3>, ISBN: 978-3-642-45084-6 (Print) 978-3-642-45085-3 (Online)
10. “An Integrated Approach To The Study And Preservation Of Paintings Using Laser Light Technology; Diagnosis, Analysis And Cleaning”, P. Pouli, K. Melessanaki, V. Tornari, E. Bernikola, G. Filippidis, D. Anglos, C. Fotakis, invited Chapter no 14 in “*the Science and Art: The Painting Surface*”, edited by A.

- Sgamellotti, B.G. Brunetti, C. Miliani, Royal Society of Chemistry, Chapter 14, p. 287-313 (2014) ISBN- 978-1-84973-636-7
11. "Laser technology for chemical analysis, structural diagnosis and cleaning of byzantine painted artworks", P. Pouli, Invited Chapter 5 in "Technology and Informatics in Cultural Heritage; applications on byzantine icons", ed. N. Miridis (University of Macedonia Press, Thessaloniki, 2014), Chapter 5, p 111-155 (2013) (in Greek) ISBN 978-960-8396-78-4
 12. "Photonic Technologies for the Safeguarding of Cultural Assets" by C. Cucci and V. Tornari in Photonics for Safety and Security edited by: Antonello Cutolo (University of Sannio, Italy), Anna Grazia Mignani (CNR – Institute of Applied Physics 'Nello Carrara', Italy), Antonella Tajani (CNR, Italy) Nov 2013, pp. 67-87, doi: 10.1142/9789814412971_0004 -ISBN: 978-981-4412-96-4
 13. The removal of surface deposits from the sculptures of Aiani archaeological Museum with laser irradiation M. Lykiardopoulou-Petrou, P. Pouli, in "The archaeological works in Ano Macedonia, 1, 2009", Proceedings of the Symposium on "The archaeological and historic research in Ano Macedonia during the year 2009", 187-201 (2011)(in Greek with English abstract), ISBN 978-960-214-993-5.
 14. 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, in Case Studies on Research Planning, Characterisation, Conservation and Management of Archaeological Site, British Archaeological Reports International Series 1877, Eds. N. Marchetti, I. Thuesen, pp. 121-129 (Archaeopress, UK, 2008)
 15. "Mobile Micro-XRF and LIBS spectrometers for diagnostic micro-analysis of ancient metal objects", A.G. Karydas, D. Anglos, M.A. Harith, Chapter 6 in "Metals and Museums in the Mediterranean", V. Argyropoulos, ed. pp.141-177 (2008).
 16. "Lasers in the analysis and conservation of Cultural Heritage; state of the art and new trends", P. Pouli, A. Nevin, A. Andreotti, Invited Chapter 12 in "New trends in analytical, environmental and Cultural Heritage Chemistry", Ed. M. P. Colombini, L. Tassi, Research Signpost (2008), pp 309-332.
 17. "Mobile micro-XRF and LIBS spectrometers for diagnostic micro-analysis of ancient metal objects", A.G. Karydas, D. Anglos, M. A. Harith, Metals and Museums in the Mediterranean, Protected, Preserving and Interpreting, ed. V. Argyropoulos, Chapter 6, 141-177 (2008).
 18. "Laser restoration of painted artworks: Fundamentals, Modeling and Advances," G. Bounos, A. Nevin, S. Georgiou, C. Fotakis, Invited Chapter 22 in "Laser Ablation and its Applications", Ed. C. Phipps, Springer Verlag, Berlin Heidelberg (2007), pp. 549-577.
 19. "Cultural Heritage Applications of LIBS", Demetrios Anglos and John Miller; Invited Chapter in the book "Laser Induced Breakdown Spectroscopy (LIBS): Fundamentals and Applications", Eds. A.W. Miziolek, V. Palleschi, I. Schechter, (Cambridge University Press, Cambridge, UK, 2006), pp. 332-367.
 20. "Cultural Heritage Applications of LIBS", Invited Chapter in new book titled "Laser Induced Breakdown Spectroscopy (LIBS): Fundamentals and Applications", Eds. A.W. Miziolek, V. Palleschi, I. Schechter (in press, 2004).
 21. "Laser Cleaning Methodologies of Polymer Substrates", S. Georgiou, Invited Chapter in "Advances in Polymer Science, Volume 168: Polymers and Light", Vol. Ed. T.K. Lippert (Springer Verlag Berlin Heidelberg), (2004) pp. 1-50.
 22. "Laser ablation in cleaning of artworks", V. Zafirooulos, Chapter 8 in: *Laser Cleaning*, Ed. B. Luk'yanchuk (World Scientific, Singapore, New Jersey, London, Hong Kong, 2002) pp. 337-386.
 23. "On the Theory of discoloration effect in pigments at laser cleaning", B. Luk'yanchuk and V. Zafirooulos, Chapter 9 in: *Laser Cleaning*, Ed. B. Luk'yanchuk (World Scientific, Singapore, New Jersey, London, Hong Kong, 2002) pp.387-407.

24. “Combination of ultraviolet and infrared laser pulses for sculpture cleaning: the application of this innovative methodology on the surface of the Acropolis monuments and sculptures”, P Pouli, V Zafirooulos, Chapter 9 in: *Study on the restoration of the Parthenon, Volume 7: Study on the cleaning of the West Frieze*, Eds. The Greek Ministry of Culture and the Committee for the Conservation of the Acropolis Monuments, Athens 2002 (*in Greek*).
25. “Lasers in the Conservation of Painted Artworks”, V. Zafirooulos and C. Fotakis, Chapter 6 in *Laser Cleaning in Conservation: an Introduction*, Ed. M. Cooper (Butterworth Heinemann, Oxford, 1998) pp. 79-90.