

LASER APPLICATIONS IN CULTURAL HERITAGE SCIENCE & CONSERVATION**LIST OF PUBLICATIONS****ARTICLES IN SCIENTIFIC JOURNALS**

1. "Development of a methodology for the characterization and assessment of biodeteriogens on archaeological surfaces by use of a portable LED-induced fluorescence instrument", A. Giakoumaki, P. Siozos, A. Filippidis, I. Pyrri, D. Anglos, P. Pouli, *Heritage Science* 10, 2022, 204. doi.org/10.1186/s40494-022-00827-x
2. "Laser-based, non-invasive monitoring and exponential analysis of the mechanical behaviour of materials with structural inhomogeneities in heat transfer, towards thermal equilibrium", K. Kosma, M. Andrianakis, V. Tornari, *Appl. Phys. A* 128, 879 (2022); doi.org/10.1007/s00339-022-05968-1
3. "Architectural Polychromy on the Athenian Acropolis: An In Situ Non-Invasive Analytical Investigation of the Colour Remains", E. Aggelakopoulou, S. Sotiropoulou, G. Karagiannis, *Heritage*, 5, 756-787 (2022); [doi:10.3390/heritage5020042](https://doi.org/10.3390/heritage5020042)
4. "A symmetry concept and significance of fringe patterns as a direct diagnostic tool in artwork conservation", V. Tornari, *Light: Advanced Manufacturing*, 3 (18), 1-22, (2022); [doi:10.37188/lam.2022.018](https://doi.org/10.37188/lam.2022.018)
5. "Determining optimum irradiation conditions for the analysis of vermilion by Raman spectroscopy", A. Philippidis, A. Mikallou, D. Anglos, *Eur. Phys. J. Plus* 136, 1194 (2021); [doi:10.1140/epjp/s13360-021-02186-1](https://doi.org/10.1140/epjp/s13360-021-02186-1)
6. "Revealing Underdrawings in Wall Paintings of Complex Stratigraphy with a Novel Reflectance Photoacoustic Imaging Prototype", A. Chaban, G.J. Tserevelakis, E. Klironomou, R. Fontana, G. Zacharakis, J. Striova, *Journal of Imaging*, 7(12):250 (2021); [doi:10.3390/jimaging7120250](https://doi.org/10.3390/jimaging7120250)
7. "Laser-induced fluorescence as a non-invasive tool to monitor laser-assisted thinning of aged varnish layers on paintings: fundamental issues and critical thresholds", O. Kokkinaki, E. Dimitroulaki, K. Melessanaki, D. Anglos, P. Pouli, *Eur. Phys. J. Plus* 136, 938 (2021); [doi:10.1140/epjp/s13360-021-01929-4](https://doi.org/10.1140/epjp/s13360-021-01929-4)
8. "Revealing Hidden Features in Multilayered Artworks by Means of an Epi-Illumination Photoacoustic Imaging System", G.J Tserevelakis, A. Chaban, E. Klironomou, K. Melessanaki, J. Striova, G. Zacharakis, *J. Imaging*, 7, 183 (2021); [doi:10.3390/jimaging7090183](https://doi.org/10.3390/jimaging7090183)
9. "Review and New Evidence on the Molluscan Purple Pigment Used in the Early Late Bronze Age Aegean Wall Paintings", S. Sotiropoulou, I. Karapanagiotis, K. S. Andrikopoulos, T. Marketou, K. Birtacha, M. Marthari, *Heritage*, 4 (1), 171-187 (2021); [doi:10.3390/heritage4010010](https://doi.org/10.3390/heritage4010010)
10. "Application of laser-induced breakdown spectroscopy and neural networks on archaeological human bones for the discrimination of distinct individuals", P. Siozos, N. Hausmann, D. Anglos, *Journal of Archaeological Science: Reports*, 32, 102769 (2021); [doi:10.1016/j.jasrep.2020.102769](https://doi.org/10.1016/j.jasrep.2020.102769)
11. "Listening to laser light interactions with objects of art: a novel photoacoustic approach for diagnosis and monitoring of laser cleaning interventions", G. J. Tserevelakis, P. Pouli, G. Zacharakis, *Heritage Science* 8, 98 (2020). [doi:10.1186/s40494-020-00440-w](https://doi.org/10.1186/s40494-020-00440-w)
12. "Materials analyses of stone artifacts from the EBA to MBA Minoan Tholos tomb P at Porti, Greece (Crete), by means of Raman spectroscopy: Results and a critical assessment of the method" G. Flouda, A. Philippidis, A. Mikallou, D. Anglos, *Journal of Archaeological Science: Reports*, 32 (2020), 102436; doi.org/10.1016/j.jasrep.2020.102436

13. “Development of a hybrid photoacoustic and optical monitoring system for the study of laser ablation processes upon the removal of encrustation from stonework”, A. Papanikolaou, G.J. Tserevelakis, K. Melessanaki, C. Fotakis, G. Zacharakis, P. Pouli, *Opto-Electronic Advances* **3**, 2, 190037-1 (2020); doi:[10.29026/oea.2020.190037](https://doi.org/10.29026/oea.2020.190037)
14. “Non-invasive photoacoustic detection of hidden underdrawings in paintings using air-coupled transducers”, G. J. Tserevelakis, P. Siozos, A. Papanikolaou, K. Melessanaki, G. Zacharakis, *Ultrasonics* **98**, 94-98 (2019); doi:[10.1016/j.ultras.2019.06.008](https://doi.org/10.1016/j.ultras.2019.06.008)
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18. “Combined multiphoton fluorescence microscopy and photoacoustic imaging for stratigraphic analysis of paintings”, G.J. Tserevelakis, V. Tsafas, K. Melessanaki, G. Zacharakis, G. Filippidis, *Optics Letters* **44**, 1154-1157 (2019); doi:[10.1364/OL.44.001154](https://doi.org/10.1364/OL.44.001154)
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