

Publications of the last 5 years (2020-2016)

1. A. Stathis, M. Stavrou, I. Papadakis, I. Obratzov, S. Couris, “***Enhancement and Tuning of the Nonlinear Optical Response Along with Wavelength-Agile Strong Optical Limiting Action of N-Octylamine Modified Fluorographenes***”, *Nanomaterials*, 2020 (accepted).
2. J. Papadakis, M. Stavrou, S. Bawari, T. N. Narayanan, S. Couris, “***Outstanding Broadband (532 nm-2.2 μ m) and Very Efficient Optical Limiting Performance of some Defect Engineered Graphenes***”, *J. Phys. Chem. Lett.* *11*, 9515-9520, 2020.
3. A. Stathis, M. Stavrou, I. Papadakis, A. Bakandritsos, T. Steklý, M. Otyepka, S. Couris, “***Octylamine modified fluorographenes as a versatile platform for the efficient engineering of the nonlinear optical properties of fluorinated graphenes***”, *Advanced Photonics Research* 2020 (in press).
4. I. Papadakis, A. Stathis, A. B. Bourlinos, S. Couris, “***Diethylamino-fluorographene: A 2D material with broadband and efficient optical limiting performance (from 500 to 1800 nm) with very large nonlinear optical response***”, *Nano Select*, *1*, 395-404, 2020.
5. D. Stefas, N. Gyftokostas, S. Couris, “***Laser Induced Breakdown Spectroscopy for elemental analysis and discrimination of honey samples***”, *Spectrochim. Acta B*, *172*, 105969, 2020
6. I. Papadakis, A. Bakandritsos, A. K. Swain, T. Szabo, S. Couris, “***Effects of Size and Oxidation on the Nonlinear Optical Response and Optical Limiting of Graphene Oxide Sheets***”, *J. Phys. Chem. C* *124* (20), 11265-11273, 2020
7. A. Stathis, I. Papadakis, N. Karampitsos, D. Kyrginas, M. Stavrou, S. Couris, “***Engineering the NLO Response of Fluorographene by Octylamine Functionalization***”, 2020 22nd International Conference on Transparent Optical Networks (ICTON), Bari, Italy, 2020, pp. 1-4, doi: 10.1109/ICTON51198.2020.9203321
8. I. Papadakis, A. Stathis, N. Karampitsos, M. Stavrou, D. Kyrginas, S. Couris, “***UV Laser Photo-Reduction of Graphene Oxide and Graphene Fluoride for the Efficient Tuning of their Nonlinear Optical Response***”, 2020 22nd International Conference on Transparent Optical Networks (ICTON), Bari, Italy, 2020, pp. 1-4, doi: 10.1109/ICTON51198.2020.9203278
9. O. Gazeli, E. Bellou, D. Stefas, S. Couris, “***Laser-based classification of olive oils assisted by machine learning***”, *Food Chem.*, *302*, 125329, 2020
10. N. Karampitsos, D. Kyrginas, S. Couris, “***On the measurement of the nonlinear optical response of graphene dispersions using fs lasers***”, *Opt. Lett.* *45*(7), 1814, 2020

11. E. Bellou, N. Gyftokostas, D. Stefanis, O. Gazeli, S. Couris, “**Laser-induced breakdown spectroscopy assisted by machine learning for olive oils classification: The effect of the experimental parameters**”, *Spectrochim. Acta B* 163, 105746, 2020
12. I. Papadakis, D. Kyrginas, A. Stathis, S. Couris, G. Potsi, A. B. Bourlinos, R. Zboril, “**Large Enhancement of the Nonlinear Optical Response of Fluorographene by Chemical Functionalization: The Case of Diethyl-amino-fluorographene**”, *J. Phys. Chem. C* 123(42), 25856–25862, 2020
13. D. Stefanis, N. Gyftokostas, E. Bellou, S. Couris, “**Laser-Induced Breakdown Spectroscopy Assisted by Machine Learning for Plastics/Polymers Identification**”, *Atoms* 7(3), 79, 2019
14. A. Stathis., I. Papadakis, N. Karampitsos, S. Couris, G. Potsi, A. B. Bourlinos, M. Otyepka, R. Zboril, “**Thiophenol-Modified Fluorographene Derivatives for Nonlinear Optical Applications**”, *ChemPlusChem* 84(9), 1288–1298, 2019
15. A. Stathis, I. Papadakis, N. Karampitsos, D. Kyrginas, M. Stavrou, D. Ziaka, S. Couris. “**Hydrogenated Fluorographene: A Fluorographene Derivative with Remarkable Third-Order Nonlinear Response**”, 21st International Conference on Transparent Optical Networks (ICTON), doi: 10.1109/ICTON.2019.8840174, 2019
16. N. Karampitsos, I. Papadakis, A. Stathis, D. Kyrginas, D. D. Ziaka, M. Stavrou, S. Couris, “**Third-Order Nonlinear Optical Properties of Some Polycyclic Aromatic Hydrocarbons**“, 2019 21st International Conference on Transparent Optical Networks (ICTON), Angers, France, 2019, pp. 1-4, doi: 10.1109/ICTON.2019.8840322
17. I. Papadakis, Z. Bouza, S. Couris, V. Mouselimis, A.B. Bourlinos, “**Dramatic Enhancement of the Nonlinear Optical Response of Hydrogenated Fluorographene: The Effect of Midgap States**”, *J. Phys. Chem. C* 122, 25573, 2018
18. I. Papadakis, Z. Bouza, A. Stathis, I. Orfanos, S. Couris, T. Miletić, D. Bonifazi, “**Experimental Study of the Structural Effect on the Nanosecond Nonlinear Optical Response of O-Doped Polycyclic Aromatic Hydrocarbons**”, *J. Phys. Chem. A*, 122, 5142–5152, 2018
19. T. Miletić, A. Fermi, I. Papadakis, I. Orfanos, N. Karampitsos, A. Avramopoulos, N. Demitri, F. De Leo, S. J. A. Pope, M. G. Papadopoulos, S. Couris, D. Bonifazi, “**A Twisted Bay-Substituted Quaterylene Phosphorescing in the NIR Spectral Region**”, *Helv. Chim. Acta* 100(11), 2017
20. T. Miletić, A. Fermi, I. Orfanos, A. Avramopoulos, F. De Leo, N. Demitri, G. Bergamini, P. Ceroni, M. G. Papadopoulos, S. Couris, D. Bonifazi, “**Tailoring colors by O-annulation of polycyclic aromatic hydrocarbons**”, *Chem. Eur. J.* 23(10), 2363–2378, 2017
21. I. Papagiannouli, D. Potamianos, T. Krasia-Christoforou, S. Couris, “**Third-order optical nonlinearities of PVP/Pd nanohybrids**”, *Opt. Mater.* 72, 226–232, 2017

22. I. Papadakis, Z. Bouza, S. Couris, A.B. Bourlinos, V. Mouselimis, A. Kouloumpis, D. Gournis, A. Bakandritsos, J. Ugolotti, R. Zboril, “**Hydrogenated Fluorographene: A 2D Counterpart of Graphane with Enhanced Nonlinear Optical Properties**”, *J. Phys. Chem. C* 121(40), 22567–22575, 2017
23. J. Cimek, N. Liaros, S. Couris, R. Stępień, M. Klimczak, R. Buczyński, “**Experimental investigation of the nonlinear refractive index of various soft glasses dedicated for development of nonlinear photonic crystal fibers**”, *Opt. Mater. Express* 7(10), 3471-3483, 2017
24. N. Liaros, S. Couris, E. Koudoumas, P. A. Loukakos, “**Ultrafast Processes in Graphene Oxide during Femtosecond Laser Excitation**”, *J. Phys. Chem. C*, 120(7), 4104-4111, 2016
25. N. Liaros, J. Tucek, K. Dimos, A. Bakandritsos, K. S. Andrikopoulos, D. Gournis, R. Zboril, S. Couris, “**The effect of the degree of oxidation on broadband nonlinear absorption and ferromagnetic ordering in graphene oxide**”, *Nanoscale* 8(5), 2908-2917, 2016
26. N. Liaros, I. Orfanos, I. Papadakis, S. Couris, “**Nonlinear optical response of some Graphene oxide and Graphene fluoride derivatives**”, *Microfluidic Nanofluidic* 3(1), 53-58, 2016
27. M. Kotzagianni, R. Yuan, E. Mastorakos, S. Couris, “**Laser-induced breakdown spectroscopy measurements of mean mixture fraction in turbulent methane flames with a novel calibration scheme**”, *Combust. Flame* 167, 72-85, 2016
28. M. Kotzagianni, E. Kakkava, S. Couris, “**Laser-induced breakdown spectroscopy (LIBS) for the measurement of spatial structures and fuel distribution in flames**”, *Appl. Spectrosc.* 70(4), 627-634, 2016
29. L. Đorđević, T. Marangoni, F. De Leo, I. Papagiannouli, P. Aloukos, S. Couris, E. Pavoni, F. Monti, N. Armaroli, M. Prato, D. Bonifazi, “**[60] Fullerene-porphyrin [n] pseudorotaxanes: self-assembly, photophysics and third-order NLO response**”, *Phys. Chem. Chem. Phys.* 18(17), 11858-11868, 2016