

# Publication list of Dr. Andreas Kaltzoglou

## 1. Academic Theses

1. Ph.D. Thesis: '[Synthesis, Characterization and Physical Properties of Semiconducting Clathrate Compounds](#)', Chemistry Department, Technical University of Munich, Germany, 2009.
2. M. Sc. Thesis: '[Synthesis and Study of Complex Compounds of Copper and Silver with Heterocyclic Thiones and Rigid Diphosphines](#)', Chemistry Department, Aristotle University of Thessaloniki, Greece, 2005.
3. B. Sc. Thesis: '[Synthesis and Spectroscopic Study of Mixed Ligand Complexes of Cu\(II\), Co\(II\), Ni\(II\) with tris\(2-aminoethyl\)amine and  \$\beta\$ -diketones. Intramolecular Schiff-base formation](#)', Chemistry Department, Aristotle University of Thessaloniki, Greece, 2003.

## 2. Publications in peer-reviewed journals

1. A. Kaltzoglou, P. Cox, P. Aslanidis, Copper(I) bromide complexes from 1,2-bis(diphenylphosphano)benzene and some heterocyclic thiones, *Inorg. Chim. Acta* 2005, 358, 3048 – 3056.
2. P. Cox, A. Kaltzoglou, P. Aslanidis, Copper(I) halide chelates of the wide bite angle diphosphane xantphos. Crystal structures of [CuBr(xantphos)(dmpymtH)] and [CuI(xantphos)(imdtH<sub>2</sub>)].CH<sub>3</sub>CN, *Inorg. Chim. Acta* 2006, 359, 3183 – 3190.
3. P. Aslanidis, P. Cox, A. Kaltzoglou, A. Tshipis, An experimental and theoretical (DFT) investigation of the coordination mode of 2,4-dithiouracil (2,4-dtucH<sub>2</sub>) in copper(I) complexes with 1,2-bis(diphenyl-phosphanyl)benzene (dppbz): The crystal structures of [Cu( $\mu$ -Br)(dppbz)]<sub>2</sub> and [CuBr(dppbz)(2,4-dtucH<sub>2</sub>)], *Eur. J. Inorg. Chem.* 2006, 334 – 344.
4. A. Kaltzoglou, P. Cox, P. Aslanidis, Silver(I) bromide complexes of the rigid diphosphanes 1,2-bis(diphenylphosphano)-benzene (dppbz) and 4,5-bis(diphenylphosphano)-9,9-dimethyl-xanthene (xantphos). Crystal structures of [Ag( $\mu$ -Br)(dppbz)]<sub>2</sub>, [AgBr(xantphos)] and [AgBr(xantphos)(py2SH)], *Polyhedron* 2007, 26, 1634 – 1642.
5. A. Kaltzoglou, S. Hoffmann, T. Fässler, Order-disorder phase transition in type-I clathrate Cs<sub>8</sub>Sn<sub>44</sub>, *Eur. J. Inorg. Chem.* 2007, 4162 – 4167.
6. A. Kaltzoglou, S. Ponou, T. Fässler, Synthesis and crystal structure of the mercury substituted type-I clathrates A<sub>8</sub>Hg<sub>4</sub>Sn<sub>42</sub> (A = K, Rb, Cs), *Eur. J. Inorg. Chem.* 2008, 538 – 542.
7. A. Kaltzoglou, T. Fässler, P. Aslanidis, A luminescent copper(I) bromide complex chelated with 4,5-bis(diphenyl-phosphano)-9,9-dimethyl-xanthene, *J. Coord. Chem.* 2008, 61, 1774 – 1781.
8. A. Kaltzoglou, S. Ponou, T. Fässler, A<sub>4</sub>Ge<sub>9</sub> (A = K and Rb) as precursors for Hg-substituted clathrate-I synthesis: crystal structure of A<sub>8</sub>Hg<sub>3</sub>Ge<sub>43</sub>, *Eur. J. Inorg. Chem.* 2008, 4507 – 4510.
9. H. Shimizu, T. Imai, T. Kume, S. Sasaki, A. Kaltzoglou, T. Fässler, Raman spectroscopy study of type-I clathrates A<sub>8</sub>Sn<sub>44</sub> (A = Rb, Cs) and Rb<sub>8</sub>Hg<sub>4</sub>Sn<sub>42</sub>, *Chem. Phys. Lett.* 2008, 464, 54 – 57.

10. A. Kaltzoglou, T. Fässler, M. Christensen, S. Johnsen, B. Iversen, I. Presniakov, A. Sobolev, A. Shevelkov, Effects of the order-disorder phase transition on the physical properties of  $A_8\text{Sn}_{44}$  ( $A = \text{Rb}, \text{Cs}$ ), *J. Mater. Chem.* 2008, 18, 5630 – 5637.
11. A. Kaltzoglou, T. Fässler, C. Gold, E.-W. Scheidt, W. Scherer, T. Kume, H. Shimizu, Investigation of substitution effects and the phase transition in type-I clathrates  $\text{Rb}_x\text{Cs}_{8-x}\text{Sn}_{44}$  ( $1.3 \leq x \leq 2.1$ ) using single-crystal X-ray diffraction, Raman spectroscopy, heat capacity and electrical resistivity measurements, *J. Solid State Chem.* 2009, 182, 2924 – 2929.
12. T. Imai, T. Kume, S. Sasaki, H. Shimizu, A. Kaltzoglou, T. Fässler, Structural stability of tin clathrates under high pressure, *J. Phys. Chem. Sol.* 2010, 71, 587 – 589.
13. A. Powell, A. Kaltzoglou, P. Vaqueiro, G. Min, J. Garcia-Cañadas, R. K. Stobart, J. Li, G. Dong, A. Wijewardane, Thermoelectric exhaust-gas energy recovery: an integrated approach, *AIP Conf. Proc.* 2012, 1449, 505 – 508
14. A. Kaltzoglou, P. Vaqueiro, A. Powell, Synthesis and thermoelectric properties of the new skutterudites  $\text{Yb}_x\text{Fe}_2\text{Ni}_2\text{Sb}_{12}$  ( $0 \leq x \leq 0.4$ ), *AIP Conf. Proc.* 2012, 1449, 251 – 254
15. A. Kaltzoglou, P. Vaqueiro, K. S. Knight, A. V. Powell, Synthesis, characterisation and physical properties of the skutterudites  $\text{Yb}_x\text{Fe}_2\text{Ni}_2\text{Sb}_{12}$  ( $0 \leq x \leq 0.4$ ), *J. Solid State Chem.* 2012, 193, 36 – 41.
16. J. Garcia-Canadas, A. V. Powell, A. Kaltzoglou, P. Vaqueiro, G. Min, Fabrication and evaluation of a skutterudite-based thermoelectric module for high-temperature applications *J. Elec. Mat.* 2013, 42, 1369 – 1374.
17. A. Kaltzoglou, A. V. Powell, K. S. Knight, P. Vaqueiro, High-temperature order-disorder transitions in the skutterudites  $\text{CoGe}_{1.5}\text{Q}_{1.5}$  ( $\text{Q} = \text{S}, \text{Te}$ ), *J. Solid State Chem.* 2013, 198, 525 – 531.
18. S. Christensen, L. Bjerg, A. Kaltzoglou, F. Juranyi, T. Fässler, T. Unruh, M. Christensen, Guest host interaction and low energy host structure dynamics in tin clathrates, *J. Appl. Phys.* 2013, 113, 084902.
19. A. Kaltzoglou, P. Vaqueiro, T. Barbier, E. Guilmeau, A. Powell, Ordered-defect sulphides as thermoelectric materials, *J. Elec. Mat.* 2014, 43, 2029 – 2034.
20. T. Barbier, P. Lemoine, S. Gascoin, O. I. Lebedev, A. Kaltzoglou, P. Vaqueiro, A. V. Powell, R. I. Smith, E. Guilmeau, Structural stability of the synthetic thermoelectric ternary and nickel-substituted tetrahedrite phases, *J. Alloys Compds.* 2015, 634, 253 – 262.
21. A. Kaltzoglou, M. Antoniadou, D. Perganti, E. Siranidi, V. Raptis, K. Trohidou, V. Psycharis, A. G. Kontos, P. Falaras, Mixed-halide  $\text{Cs}_2\text{SnI}_3\text{Br}_3$  perovskite as low resistance hole-transporting material in dye-sensitized solar cells, *Electrochim. Acta* 2015, 184, 466 – 474.
22. T. Barbier, S. Rollin-Martinet, P. Lemoine, F. Gascoin, A. Kaltzoglou, P. Vaqueiro, A. V. Powell, E. Guilmeau, Thermoelectric materials: a new rapid synthesis process for nontoxic and high-performance tetrahedrite compounds, *J. Am. Ceram. Soc.* 2016, 99, 51 – 56.
23. R. G. Niemann, A. G. Kontos, D. Palles, E. I. Kamitsos, A. Kaltzoglou, F. Brivio, P. Falaras, P. J. Cameron, Halogen effects on ordering and bonding of  $\text{CH}_3\text{NH}_3^+$  in  $\text{CH}_3\text{NH}_3\text{PbX}_3$  ( $\text{X} = \text{Cl}, \text{Br}, \text{I}$ ) hybrid perovskites: A vibrational spectroscopic study, *J. Phys. Chem. C* 2016, 120, 2509 – 2519.
24. A. Kaltzoglou, M. Antoniadou, A. G. Kontos, C. C. Stoumpos, D. Perganti, E. Siranidi, V. Raptis, K. Trohidou, V. Psycharis, M. G. Kanatzidis, P. Falaras, Optical-vibrational

- properties of the  $\text{Cs}_2\text{SnX}_6$  ( $X = \text{Cl}, \text{Br}, \text{I}$ ) defect perovskites and hole-transport efficiency in dye-sensitized solar cells, *J. Phys. Chem. C* 2016, 120, 11777 – 11785.
25. D. H. Fabini, C. C. Stoumpos, G. Laurita, A. Kaltzoglou, A. G. Kontos, P. Falaras, M. G. Kanatzidis, R. Seshadri, Reentrant structural and optical properties and large positive thermal expansion in perovskite formamidinium lead iodide, *Angew. Chem. Int. Ed.* 2016, 55, 15392 – 15396.
  26. A. Kaltzoglou, D. Perganti, M. Antoniadou, A. G. Kontos, P. Falaras, Stress tests on dye-sensitized solar cells with the  $\text{Cs}_2\text{SnI}_6$  defect perovskite as hole-transporting material, *Energy Procedia* 2016, 102, 49 – 55.
  27. A. G. Kontos, A. Kaltzoglou, E. Siranidi, D. Palles, G. K. Angeli, M. K. Arfanis, V. Psycharis, Y. S. Raptis, E. I. Kamitsos, P. N. Trikalitis, C. C. Stoumpos, M. G. Kanatzidis, P. Falaras, Structural stability, vibrational properties, and photoluminescence in  $\text{CsSnI}_3$  perovskite upon the addition of  $\text{SnF}_2$ , *Inorg. Chem.* 2017, 56, 84 – 91.
  28. E. Polydorou, E. Sakelis, A. Soultati, A. Kaltzoglou, T. Papadopoulos, J. Briscoe, D. Tsikritzis, M. Fakis, L. C. Palilis, S. Kennou, P. Argitis, P. Falaras, D. Davazoglou, M. Vasilopoulou, Extremely stable, high-efficiency polymer solar cells via hydrogen doping of ZnO interlayers, *Nano Energy* 2017, 34, 500 – 514.
  29. A. Kaltzoglou, C. C. Stoumpos, A. G. Kontos, G. K. Manolis, K. Papadopoulos, K. G. Papadokostaki, V. Psycharis, C. C. Tang, Y.-K. Jung, A. Walsh, M. G. Kanatzidis, P. Falaras, Trimethylsulfonium lead triiodide: an air-stable hybrid halide perovskite, *Inorg. Chem.* 2017, 56, 6302 – 6309.
  30. P. Vaqueiro, G. Guelou, A. Kaltzoglou, R. I. Smith, T. Barbier, E. Guilmeau, A. V. Powell, The influence of mobile copper ions on the glasslike thermal conductivity of copper-rich tetrahedrites, *Chem. Mater.* 2017, 29, 4080 – 4090.
  31. E. Polydorou, M. A. Botzakaki, I. Sakellis, A. Soultati, A. Kaltzoglou, T. A. Papadopoulos, J. Briscoe, C. Drivas, K. Seintis, M. Fakis, L. C. Palilis, S. N. Georga, C. A. Krontiras, S. Kennou, P. Falaras, N. Boukos, D. Davazoglou, P. Argitis, M. Vasilopoulou, Improved stability of polymer solar cells in ambient air via atomic layer deposition of ultra-thin dielectric layers, *Adv. Materials Interf.* 2017, 1700231(12).
  32. M. Tountas, Y. Topal, E. Polydorou, A. Soultati, A. Verykios, A. Kaltzoglou, T. A. Papadopoulos, F. Auras, K. Seintis, M. Fakis, L. C. Palilis, D. Tsikritzis, S. Kennou, M. Koutsourelis, G. Papaioannou, M. Ersöz, M. Kus, P. Falaras, D. Davazoglou, P. Argitis, M. Vasilopoulou, Low work function lacunary polyoxometalates as electron transport interlayers for inverted polymers solar cells of improved efficiency and stability, *ACS Appl. Mater. Interfaces* 2017, 9, 22773 – 22787.
  33. A. Kaltzoglou, M. M. Elsenety, I. Koutselas, A. G. Kontos, K. Papadopoulos, V. Psycharis, C. P. Raptopoulou, D. Perganti, T. Stergiopoulos, P. Falaras, Synthesis, characterization and optoelectronic properties of chemically stable  $(\text{CH}_3)_3\text{SPbI}_{3-x}\text{Br}_x$  and  $(\text{CH}_3)_3\text{SPbI}_{3-x}\text{Cl}_x$  ( $x = 0, 1, 2, 3$ ) perovskites, *Polyhedron* 2018, 140, 67 – 73.
  34. M. M. Elsenety, A. Kaltzoglou, M. Antoniadou, I. Koutselas, A. G. Kontos, P. Falaras, Synthesis, characterization and use of highly stable trimethyl sulfonium tin(IV) halide defect perovskites in dye sensitized solar cells, *Polyhedron* 2018, 150, 83 – 91.
  35. M. Tountas, A. Verykios, E. Polydorou, A. Soultati, A. Kaltzoglou, N. Balis, P. A. Angaridis, M. Papadakis, V. Nikolaou, F. Auras, L. C. Palilis, D. Tsikritzis, E. K. Evangelou, S. Gardelis, M. Koutsourelis, G. Papaioannou, P. Falaras, D. Davazoglou, P. Argitis, S. Kennou, A. G. Coutsolelos, M. Vasilopoulou, Triazine-Functionalized Zinc-Porphyrin of High Dipole Moment as Effective Cathode Interfacial Modifier for High-

- Performance, Air-Stable, Solution-Processable Polymers Solar Cells, *ACS Appl. Mater. Interfaces* 2018, 10, 20728 – 20739.
36. M. Tountas, Y. Topal, A. Verykios, A. Soultati, A. Kaltzoglou, T. A. Papadopoulos, F. Auras, K. Seintis, M. Fakis, D. Tsikritzis, S. Kennou, A. Fakharuddin, L. Schmidt-Mende, S. Gardelis, M. Kus, P. Falaras, P. Argitis, M. Vasilopoulou, A Silanol-Functionalized Polyoxometalate with Excellent Electron Transfer Mediating Behavior to ZnO and TiO<sub>2</sub> Cathode Interlayers for Highly Efficient and Extremely Stable Polymer Solar Cells, *J. Mater. Chem. C* 2018, 6, 1459 – 1469.
  37. E. Polydorou, M. Botzakaki, C. Drivas, K. Seintis, I. Sakelis, A. Soultati, A. Kaltzoglou, T. Speliotis, M. Fakis, L. C. Palilis, S. Kennou, A. Fakharuddin, L. Schmidt-Mende, D. Davazoglou, P. Falaras, P. Argitis, C. A. Krontiras, S. N. Georga, M. Vasilopoulou, Insights into the passivation effect of atomic layer deposited hafnium oxide for efficiency and stability enhancement in organic solar cells, *J. Mater. Chem. C* 2018, 6, 8051 – 8059.
  38. G. Bounos, M. Karnachoriti, A. G. Kontos, C. C. Stoumpos, L. Tsetseris, A. Kaltzoglou, X. Guo, X. Lü, Y. S. Raptis, M. G. Kanatzidis, P. Falaras, Defect Perovskites Under Pressure: Structural Evolution of Cs<sub>2</sub>SnX<sub>6</sub> (X = Cl, Br, I), *J. Phys. Chem. C* 2018, 122, 24004 – 24013.
  39. N. Balis, A. H. Zaky, D. Perganti, A. Kaltzoglou, L. Sygellou, F. Katsaros, T. Stergiopoulos, A. G. Kontos, P. Falaras, Dye sensitization of titania compact layer for efficient and stable perovskite solar cells, *ACS Appl. Energy Mater.* 2018, 10, 20728 – 20739.
  40. A. G. Kontos, A. Kaltzoglou, M. Afranis, K. M. McCall, C. C. Stoumpos, B. W. Wessels, P. Falaras, M. G. Kanatzidis, Dynamic disorder, band gap widening and persistent near-IR photoluminescence up to at least 523 Kelvin in ASnI<sub>3</sub> perovskites (A = Cs<sup>+</sup>, CH<sub>3</sub>NH<sub>3</sub><sup>+</sup> and NH<sub>2</sub>-CH=NH<sub>2</sub><sup>+</sup>), *J. Phys. Chem. C* 2018, 122, 26353 – 26361.
  41. C. Athanasekou, I. Katris, E. Savopoulou, K. Beltsios, T. Tsoufis, A. Kaltzoglou, P. Falaras, I. Bounos, M. Antoniou, P. Boutikos, G. Romanos, Mixed matrix PVDF/Graphene and Composite-Skin PVDF/Graphene Oxide Membranes applied in Membrane Distillation, *Polymer Engineering & Science* 2019, E272 – E278.
  42. I. Ibrahim, C. Athanasekou, A. Kaltzoglou, F. Katsaros, E. Devlin, A. G. Kontos, P. Falaras, Photocatalysis as an advanced reduction process-technology (ARPART): the reduction of 4-nitrophenol using titania nanotubes-ferrite nanocomposites, *J. Hazard. Materials* 2019, 372, 37 – 44.
  43. A. Soultati, A. Fakharuddin, E. Polydorou, C. Drivas, A. Kaltzoglou, M. I. Haider, F. Kournoutas, M. Fakis, L. C. Palilis, S. Kennou, D. Davazoglou, P. Falaras, P. Argitis, S. Gardelis, A. Kordatos, A. Chronos, L. Schmidt-Mende, M. Vasilopoulou, Lithium doping of ZnO for high efficiency and stability fullerene and non-fullerene organic solar cells, *ACS Appl. Energy Mater.* 2019, 2, 1663 – 1675.
  44. A. Kaltzoglou, G. K. Manolis, M. M. Elsenety, I. Koutselas, V. Psycharis, A. G. Kontos, P. Falaras, Synthesis and characterization of lead-free (CH<sub>3</sub>)<sub>3</sub>SSnI<sub>3</sub> 1-D perovskite, *Journal of Electronic Materials* 2019, 48, 7533 – 7538.
  45. K. Gkini, M. Antoniadou, N. Balis, A. Kaltzoglou, A. G. Kontos, P. Falaras, Mixing cations and halide anions in perovskite solar cells, *Materials Today: Proceedings* 2019, 19, 73 – 78.
  46. L. Givalou, M. Antoniadou, A. Kaltzoglou, P. Falaras, High performance solid state solar cells incorporating CdS quantum dots and CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> perovskite, *Materials Today:*

Proceedings 2019, 19, 79 – 85.

47. I. Ibrahim, A. Kaltzoglou, C. Athanasekou, F. Katsaros, E. Devlin, A. G. Kontos, P. Falaras Magnetically separable  $\text{TiO}_2/\text{CoFe}_2\text{O}_4/\text{Ag}$  nanocomposites for the photocatalytic reduction of hexavalent chromium pollutant under UV and artificial solar light, *Chemical Engineering Journal* 2020, 381, 122730.
48. M. M. Elsenety, M. Antoniadou, A. Kaltzoglou, A. G. Kontos, A. I. Philippopoulos, C. A. Mitsopoulou, P. Falaras, Synthesis, characterization of  $((\text{CH}_3)_3\text{S})_2\text{SnI}_{6-x}\text{Cl}_x$  and  $((\text{CH}_3)_3\text{S})_2\text{SnI}_{6-x}\text{Br}_x$  ( $x = 1, 2$ ) perovskites and use in dye-sensitized solar cells, *Materials Chemistry and Physics* 2020, 239, 122310.
49. K. Gkini, A. Verykios, N. Balis, A. Kaltzoglou, M. Papadakis, K. S. Adamis, K. Armadorou, A. Soutlati, C. Drivas, S. Gardelis, I. D. Petsalakis, L. C. Palilis, A. Fakharuddin, M. Haider, X. Bao, S. Kennou, P. Argitis, L. Schmidt-Mende, A. G. Coutsolelos, P. Falaras, M. Vasilopoulou, A zinc porphyrin-triazine-bodipy donor- $\pi$  spacer-acceptor triad as a universal electron transfer mediator for efficient organic and perovskite solar cells with long-term stability, *ACS Appl. Mater. Interfaces* 2020, 12, 1120 – 1131.
50. M. M. Elsenety, M. Antoniadou, N. Balis, A. Kaltzoglou, L. Sygellou, A. Stergiou, N. Tagmatarchis, P. Falaras, Stability improvement and performance reproducibility enhancement of perovskite solar cells using  $\text{MAFACsPbI}_{3-x}\text{Br}_x/(\text{CH}_3)_3\text{SPbI}_3$  3D/1D bilayers, *ACS Appl. Energy Mater.* 2020, 3, 2465 – 2477.
51. A. G. Kontos, G. K. Manolis, A. Kaltzoglou, D. Palles, E. I. Kamitsos, M. G. Kanatzidis, P. Falaras, Halogen- $\text{NH}_2^+$  interaction, temperature induced phase transitions and ordering in  $(\text{NH}_2\text{CHNH}_2)\text{PbX}_3$  ( $X = \text{Cl}, \text{Br}, \text{I}$ ) hybrid perovskites, *J. Phys. Chem. C* 2020, 124, 8479 – 8487.
52. A. A. Zaky, N. Balis, K. Gkini, C. Athanasekou, A. Kaltzoglou, T. Stergiopoulos, P. Falaras, Dye engineered perovskite solar cells under accelerated thermal stress and prolonged light exposure, *Chemistry Select* 2020, 5, 4454 – 4462.
53. A. A. Soutlati, A. Verykios, K. Armadorou, I. Haider, A. Kaltzoglou, C. Drivas, A. Fakharuddin, X. Bao, C. Yang, A. R. M. Yusoff, E. K. Evangelou, I. Petsalakis, S. Kennou, P. Falaras, G. Pistolis, P. Argitis, M. Vasilopoulou, Suppressing the photocatalytic activity of zinc oxide electron transport layer in non-fullerene organic solar cells with a pyrene-bodipy interlayer, *ACS Appl. Mater. Interfaces* 2020, 12, 21961 – 21973.
54. A. A. Zaky, E. Christopoulos, K. Gkini, M. K. Arfanis, L. Sygellou, A. Kaltzoglou, A. Stergiou, N. Tagmatarchis, N. Balis, P. Falaras, Enhancing efficiency and decreasing photocatalytic degradation of perovskite solar cells using a hydrophobic copper-modified titania electron transport layer, *Applied Catalysis B: Environmental* 2021, 284, 119714.
55. G. V. Belessiotis, M. Arfanis, A. Kaltzoglou, V. Likodimos, Y. S. Raptis, P. Falaras, A. G. Kontos, Temperature effects on the vibrational properties of the  $\text{Cs}_2\text{SnX}_6$  'defect' perovskites ( $X = \text{I}, \text{Br}, \text{Cl}$ ), *Materials Chemistry and Physics* 2021, 267, 124679.
56. A. Kaltzoglou, P. Falaras, Recent developments on hybrid perovskite materials for solar energy conversion and environmental protection, *Current Opinion in Chemical Engineering* 2021, 33, 100708.
57. A. Ioannou, I. Vareli, A. Kaltzoglou, I. Koutselas, Synthesis, characterization and optoelectronic properties of 2D hybrid  $\text{RPbX}_4$  semiconductors based on an isomer mixture of hexanediamine-based dications, *Z. Naturforschung B*, 2021, 76, 517 – 528.
58. M. Elsenety, A. Kaltzoglou, I. Koutselas, V. Psycharis, C. P. Raptopoulou, A. G. Kontos,

- K. Papadokostaki, N. K. Nasikas, P. Falaras, Synthesis, crystal structure and broadband emission of  $(\text{CH}_3)_3\text{SSnCl}_3$ , *Inorg. Chem.* 2022, 61, 4769 – 4777.
59. I. Ibrahim, G. V. Belessiotis, M. Antoniadou, A. Kaltzoglou, E. Sakellis, F. Katsaros, L. Sygellou, M. K. Arfanis, T. M. Salama, P. Falaras, Silver decorated  $\text{TiO}_2/\text{g-C}_3\text{N}_4$  bifunctional nanocomposites for photocatalytic elimination of water pollutants under UV and artificial solar light, *Results in Engineering* 2022, 14, 100470.
60. D. N. Kossyvakis, E. V. Christoforou, P. Falaras, A. Kaltzoglou, Optimum coupling of photovoltaic devices and Peltier coolers for improved performance and stability, *Int. J. Sustain. Energy* 2022, 41, 1667 – 1693.
61. G.V. Belessiotis, M. Arfanis, A. Kaltzoglou, V. Likodimos, Y.S. Raptis, P. Falaras, A.G. Kontos, Temperature dependence of the vibrational and emission spectra in the 0D vacancy-ordered  $\text{Cs}_2\text{SnI}_6$  perovskite, *Materials Today: Proceedings* 2022, 67, 971 – 974.
62. A. Anastasopoulos, A. Kaltzoglou, A. Sinani, E. Christopoulos, P. Koralli, V. Psycharis, P. Falaras, C. Riziotis, M. Kandyla, Polycrystalline formamidinium lead bromide ( $\text{FAPbBr}_3$ ) perovskite as a self-powered and fast visible-light photodetector, *Microelectronic Engineering* 2023, 273, 111960.
63. E. Christopoulos, M. M. Elsenety, A. Kaltzoglou, C. C. Stoumpos, M. Gaboardi, J. R. Plaisier, P. Tsipas, E. Stathatos, E. G. Vitoratos, A. Dimoulas, P. Falaras, 3D/1D Architecture Using a 1-Hexyl-3-methylimidazolium Lead Triiodide Interlayer for Robust and Highly Performing Perovskite Solar Cells, *ACS Appl. Electron. Mater.* 2023, 5, 2093–2105.
64. V. Raptis, A. Kaltzoglou, Interface modelling for  $(\text{CH}_3)_3\text{SPbI}_3$  and  $(\text{NH}_2)_2\text{CHPbI}_3$  perovskite layers, *Journal of Physics and Chemistry of Solids* 2023, accepted.

### 3. Book Chapter

1. A. Kaltzoglou, A. G. Kontos, P. Falaras, Role of Nanospectroscopy in the Development of 3<sup>rd</sup> Generation Photovoltaics, Book Title 'Optical Nanospectroscopy – Applications' 2022, de Gruyter Publisher, <https://doi.org/10.1515/9783110442908-004>.