

Curriculum Vitae

Last Name: Baskoutas

First Name: Sotirios

Employment/Occupation: Professor (Full)

<http://nanomat.upatras.gr/>,

<https://www.chemie.uni-hamburg.de/en/institute/pc/arbeitsgruppen/bester/personen/weitere-personen/baskoutas-sotirios.html>

email: bask@upatras.gr

Education:

1993 Ph.D. thesis, Faculty of Physics, University of Patras, Patras, Greece

1989 Diploma in Physics, University of Patras, Patras, Greece

Professional Experience:

2017-today	Professor (Full) Materials Science Dept. University of Patras, Greece
2013-2017	Associate Professor, Materials Science Dept. University of Patras, Greece
2001-2013	Assistant Professor, Materials Science Dept. University of Patras, Greece (permanent position)
2008-2009	Guest Scientist, Max Planck Institute for Solid State Research, Stuttgart, Germany (on sabbatical: 6 months)
2008-2011	Assistant Professor, Materials Science Dept. University of Patras, Greece
2003–2008	Lecturer, Materials Science Dept. University of Patras, Greece
2001-2003	Assistant Professor (Fixed term), Materials Science Dept. University of Patras, Greece
2001	Lecturer (Fixed term), Materials Science Dept. University of Patras, Greece
1999-2001	Post-Doctoral Researcher, INT Institut für Nanotechnologie, Karlsruhe, Germany.
1996-1999	Post-Doctoral Researcher, Engineering Science Department, University of Patras, Greece.
1995-1996	Post-Doctoral Researcher, Department of Physics, Division of Applied Physics, Laboratory of Molecular Physics, University of Patras, Greece.
1991-1993	Research Assistant, Department of Physics, Ia Università di Roma “La Sapienza”, and Institute for Nuclear Research (INFN), Rome, Italy.
1989-1991	Research Assistant, Department of Physics, University of Patras, Greece.

Research Interests:

- Theoretical and computational methods for the study of electronic and optical properties of semiconductor nanostructured materials for optoelectronic and biological applications.
- Synthesis and Characterization of amorphous and nanocrystalline materials for energy, environmental and biological applications.

Short time visits

- **2015- today:** Visiting Scientist, Department of Chemistry, University of Hamburg, Germany.
- **2020** Visiting Scientist, Department of Applied Informatics and Computational Physics, Nanostructures and Nanodevices, Faculty of Physics and Applied Computer Science, Krakow, Poland.

- **2018 and 2019** Visiting Scientist, Department of Physics, Russian-Armenian University, Yerevan Armenia.
- **2008-2015:** Visiting Scientist, Max Planck Institute for Solid State Research, Stuttgart, Germany.
- **2006:** Visiting Scientist, Institute for Microstructural Sciences National Research Council of Canada (NRC) Ottawa, Ontario, Canada.
- **2005 and 2006:** Visiting Scientist, Research Institute of Solid State Physics and Optics, Budapest, Hungary.
- **1996:** Visiting Scientist, Department of Physics Fundamental y Experimental, University of Laguna, Laguna, Tenerife, Spain.
- **1993:** Visiting Scientist, Department of Physics University of Bruxells, Belgium.
- **1993:** Visiting Scientist, Max-Planck Institut für Plasma Physik Garching, Munich, Germany

Research Supervision

PhD Students:

1. Zaiping Zeng (*Electronic properties of nanostructured semiconductor materials*), **completed**
2. Ghulam Dar (*Semiconductor Nanostructures for Device Applications*), **completed**
3. Mohammed Abaker (*Metal Oxide Nanostructures and Their Applications*), **completed**
4. Ahmed Abdelbagi Ibrahim Mohammed (Semiconductor Nanomaterials for Environmental Applications), **completed**.

M.Sc. Students:

1. Antonios Grigoropoulos (*Synthesis, characterization and study of the properties of ZnO nanostructures*), **completed**.
 2. Georgios Gorgolis (*Binding Energy of Surface Localized Impurity States in a Semiconductor Nanostructure with the Presence of Tilted Electric and Magnetic Fields*), **completed**.
- Supervision of 50 undergraduate theses, Department of Materials Science
 - Member of several PhD review Committees at the University of Patras and in abroad.

Administrative Positions

1. (2015-2020) Chair, Department of Materials Science, University of Patras, Greece.
2. (2017-2020), Vice Dean, School of Natural Sciences, University of Patras, Greece.
3. (2015-2020), Member of Karatheodori Scientific Committee, University of Patras, Greece.

Grants and Funding

1. (2020-today) **Group Leader** HORIZON 2020, *Twinning to strengthen the Russian-Armenian University's research and innovation capacity in nanomaterials for quantum information and quantum optics*, budget: 998000 Euro.
2. (2016-2019) Project with title *Perovskite Materials for Efficient Solar Cells*, **PERMASOL**, AIT Austrian Institute of Technology GmbH.
3. (2015-2016) **Group Leader**, Project ARIS (Computational facilities).
4. (2011- today) Project: National Plan for Science, Technology and Innovation (MAARIFAH), King Abdulaziz City for Science and Technology, Kingdom of Saudi Arabia, Grant Number: 12-NAN2551-02
5. (2011- today) Project: Ministry of Higher Education, Kingdom of Saudi Arabia under Promising Centre for Sensors and Electronic Devices (PCSED) at Najran University, Grant Number: PCSED-021-13
6. (2011- today) Project: Deanship of Scientific Research (DSR), Najran University, Najran, DSR, Najran University, Grant Number: NU/ESCI/14/025.
7. (2011-2014) **Group Leader**, Project Thalys entitled: *Feasibility studies on novel nanostructures of ZnO and their applications in nanophotonics and energy conversion: Experimental and theoretical approach*, Research Committee ICEHT-FORTH Patras, budget: 600000 Euro.
8. (2010-2013) **Group Leader**, Project Karatheodori entitled: *Modeling-Design and Development of semiconductor Nanostructured Materials*, Research Committee, University of Patras, budget: 33000 Euro.
9. (2004-2007) **Group Leader**, Project Collaboration Greece-Hungary, entitled: *Fabrication Technology, Characterization and Study of the properties of bulk amorphous and nanophase metallic alloys*, General Secretary of Research and Technology, Hellenic Ministry of Education, budget: 34000 Euro.
10. (2004-2007) **Group Leader**, Project Karatheodori entitled: *Design and Development of nanocrystalline semiconductor materials for photovoltaic and optoelectronic applications*, Research Committee, University of Patras, budget: 33000 Euro.

11. (2005-2008), Team Member, Project Pythagoras II entitled: *Controlled Dynamics of Nanostructures and Applications in Quantum Computers*, General Secretary of Research and Technology, Hellenic Ministry of Education, budget: 54000 Euro.
12. (2005-2008), Team Member, Project Arhimides entitled: *Controlled Dynamics of Nanostructures*, General Secretary of Research and Technology, Hellenic Ministry of Education, budget: 60000 Euro.
13. (2001-2004), Team Member, Project Karatheodori entitled: *Synthesis, characterization and properties of nanostructured semiconductors*, Research Committee, University of Patras, budget: 23000 Euro.
14. (2000-2001), Team Member, Project PENED entitled: *Study of nanostructured particles in liquid crystals and polymers*, General Secretary of Research and Technology, Hellenic Ministry of Education, budget: 60000 Euro.
15. (1999-2001), Team Member, Project Collaboration Greece-Georgia entitled: *Electrical and magnetical properties of High- T_C superconductors synthesized and consolidated at very high pressures*, General Secretary of Research and Technology, Hellenic Ministry of Education, budget: 14000 Euro.
16. (1999-2001), Team Member, Project INTAS entitled: *Production of high density, high hardness B_4C and boron contained materials*, Secretary of Research and Technology, Hellenic Ministry of Education, budget: 20000 Euro.
17. (1999-2001), Group Leader, German Project entitled: *Modeling and behavior of clusters and nanostructured materials, properties and applications of quantum dots*, International Büro of the Bundesministerium für Bildung und Forschung, budget: 20000 Euro.
18. (1/11/1997-30/04/1998) Team Member, Project: *Quasicrystalline, Amorphous and Nanocrystalline Materials*, Engineering Science Department, University of Patras, budget: 20000 Euro
19. (1/9/1996-31/12/1997) Team Member, Project: HUMAN CAPITAL AND MOBILITY: *Modifications of Structural Vibrational and Electronic Characteristics of Oxides Induced by Defects at the Surface and in Very Thin Films*, Engineering Science Department, University of Patras, budget: 20000 Euro
20. (1/11/1995-30/4/1996) Team Member, Project: *Synthesis, physical and electrochemical properties of semiconductors II – VI και I – III – IV in colloids and thin films»,* Department of Physics, University of Patras.
21. (1993-1996) Team Member, Project: Italian M.U.R.S.T (Ministry of University and of Scientific and Technological Research) και INFN (National Institute for Nuclear Research), Dept. of Physics I^a Università di Roma ‘La Sapienza’, Dept. of Physics ‘E. Amaldi’ II, Università di Roma ‘Roma Tre’, Rome, Italy

Distinctions

Professor's Ioannidis list

My name is on the list of Prof. Ioannidis (Professor of Medicine and of Health Research and Policy at Stanford University School of Medicine & Professor of Statistics at Stanford University School of Humanities and Sciences") among the 300 names of scientists from all the scientific fields with Greek affiliation who have the greatest influence worldwide on international literature.

Editor in Chief

- *Journal of Advanced Physics*, American Scientific Publishers

Associate Editor

- *Reviews in Advanced Sciences and Engineering*, American Scientific Publishers

Associate European Editor

- *Science of Advanced Materials*, American Scientific Publishers
- *Journal of Nanoengineering and Nanomanufacturing*, American Scientific Publishers

Editorial Board

- *Nanomaterials*, MDPI Publishers
- *Journal of Computational and Theoretical Nanoscience*, American Scientific Publishers
- *Journal of Nanomanufacturing*, MDPI Publishers
- *Recent Progress in Materials*, Lidsen Publ. Inc.

Guest Editor

- For the Special Issue entitled «*Electronic Properties of Low Dimensional Systems*» of **Journal of Computational and Theoretical Nanoscience**, American Scientific Publishers (**IF: 1.666**).

- For the Special Issue entitled «*Advanced Materials for Technological and Biomedical Applications*», Guest Editors: Nikolaos Bouropoulos and Sotirios Baskoutas, of the Journal: **Science of Advanced Materials**, American Scientific Publishers (**IF: 1.318**).
- For the Special Issue entitled «*Zinc Oxide Nanostructures: Synthesis and Characterization*», **Materials**, MDPI (**IF: 2.972**).
- For the Special Issue entitled «*Advanced Materials for Technological and Biomedical Applications*», Guest Editors: Nikolaos Bouropoulos and Sotirios Baskoutas, **Materials**, MDPI (**IF: 2.972**).
- For the Special Issue entitled «*Advanced Functional Nanomaterials and Their Applications*», Guest Editors: Ahmad Umar and Sotirios Baskoutas, **Materials**, MDPI (**IF: 2.972**).
- For the Special Issue entitled «*Zinc Oxide Nanomaterials and Based Devices*», Guest Editors: Nikolaos Bouropoulos, Ahmad Umar and Sotirios Baskoutas, **Crystals** MDPI (**IF: 2.061**).
- For the Special Issue entitled «*Semiconductor Nanomaterials: from Growth, properties to applications*», Guest Editors: Ahmad Umar and Sotirios Baskoutas, **Nanomaterials**, MDPI (**IF: 4.034**).

Conferences

Member of the Local Organizing Committee, 2010 Villa Conference on Interactions Among Nanostructures, Santorini, Greece, June 21-25.

Member of the International Advisory Committee, 2016 Materials Science and Nanotechnology, Global Cognition Conference, Beijing, China, July 28-29.

Member of the International Advisory Committee, 2016 EMN Meeting on Quantum Matter 2016, Energy Materials in Nanotechnology, 30 November-4 December, Mauritius.

Referee in Scientific Proposals

1. General Secretary of Research and Technology (2003-today)
2. State Scholarship Foundation (IKY) (IKY) (2014).
3. Hellenic Foundation for Research and Innovation (ΕΛΙΔΕΚ) (2019).

Referee in International Scientific Journals

Nano Letters

Journal of Nanoscience and Nanotechnology

Journal of Applied Physics

Superlattices and Microstructures

Journal of Optics B: Quantum and Semicl. Optics

Journal of Physics A: Mathematical and General

Journal of Physical Chemistry C

ACS Nano

ACS Photonics

Chemical Physics Letters

Physica Scripta

International Journal of Modern Physics B

Modern Physics Letters B

Physica B

Physics Letters A

Journal of Non Crystalline Solids

Materials Science and Engineering B

Physica E

Solid State Sciences

Journal of Alloys and Compounds

Materials & Design

ACS Applied Materials & Interfaces

Journal of Physical Chemistry C

Polyhedron

Journal of Magnetism and Magnetic Materials

Chemical Physics

The Electrochemical Society Journals

Journal of Physics and Chemistry of Solids

Applied Physics A Materials Science and Processing

Invited Talks at Universities

- ‘Quantum Tunneling of a damped and driven inverted harmonic oscillator’, January 1993, Istituto Nazionale Fisica Nucleare, Universita di Catania, Italy.
- ‘Tunneling Effect- An open problem’, March 1993, Free Univ Brussels, Inst Int Phys & Chim Fondes E Solvay, B-1050 Brussels, Belgium.
- ‘Novel Semiconductor Nanostructures’, December 2018, Department of Physics and Astronomy, Materials Physics, Uppsala University, Sweden.
- ‘Novel Semiconductor Nanostructures, Theory and Experiment’, September 2019, Department of Physics, Russian-Armenian University, Yerevan, Armenia.
- ‘Optical Properties of ZnO semiconductor Nanostructures: Experiment and Theory’, March 2020, Department of Applied Informatics and Computational Physics, Nanostructures and Nanodevices, Faculty of Physics and Applied Computer Science, Krakow, Poland.

Representative Publications in International peer-reviewed Journals

1. **Baskoutas, S.**, G. Bester G., (2010): *Conventional Optics from Unconventional Electronics in ZnO colloidal quantum dots*, Journal of Physical Chemistry C **114**, 9301–9307.
2. Chrissanthopoulos A., **Baskoutas S.**, Bouropoulos N., Dracopoulos V., Pouloupoulos P. and S. N. Yannopoulos S.N., (2011): *Synthesis and characterization of ZnO/NiO p-n heterojunctions: ZnO nanorods grown on NiO thin film by thermal evaporation*, Photonics and Nanostructures **9**, 132-139 (cited in Top 25 articles of the journal, December 2010).
3. Abaker M, Umar A, **Baskoutas S**, Kim S. H. and Hwang S. W., (2011): *Structural and Optical Properties of CuO Layered Hexagonal Disks Synthesized by Low-Temperature Hydrothermal Process*, Journal of Physics D-Applied Physics **44**, 155405.
4. **Baskoutas S.**, Bester G, (2011) *Transition in the Optical Emission Polarization of ZnO Nanorods* Journal of Physical Chemistry C **115**, 15862-15867.
5. Pouloupoulos P., **Baskoutas S**, Pappas SD, Garoufalis CS, Droulias SA, Zamani A. and Kapaklis V., (2011) *Intense quantum confinement effects in Cu₂O thin films* Journal of Physical Chemistry C **115**, 14839-14843.
6. Abaker M., Umar A, **Baskoutas S**, Rahman MM, Al-Sayari SA, Al-Hajry A., Kim SH and Hwang SW, (2011) *A highly sensitive ammonia chemical sensor based on alpha-Fe₂O₃ nanoellipsoids*, Journal of Physics D-Applied Physics **44**, 425401.
7. **Baskoutas S.**, Garoufalis C., Terzis, A. F., (2011) *Linear and Nonlinear Optical Absorption Coefficients in Inverse Parabolic Quantum Wells under Static external fields*, European Physical Journal B **84**, 241-247.
8. Dar G. N., Umar A., Zaidi S. A., **Baskoutas S.**, Kim S. H., Abaker M., Al-Hajry A., Al-Sayari, S. A., (2011) *Fabrication of Highly Sensitive Non-Enzymatic Glucose Biosensor Based on ZnO Nanorods*, Science of Advanced Materials **3**, 901-906.
9. Dar G. N., Umar A., Zaidi S. A., **Baskoutas S.**, Hwang S. W., Abaker M., Al-Hajry A., Al-Sayari, S. A., (2012) *Ultra-high sensitive ammonia chemical sensor based on ZnO nanopencils*, Talanta **89**, 155-161.
10. Ibrahim A. A., Dar G. N., Zaidi S. A., Umar A., Abaker M., Bouzid, H., **Baskoutas S.**, (2012) *Growth and properties of Ag-doped ZnO nanoflowers for highly sensitive phenyl hydrazine chemical sensor application*, Talanta **93**, 257-263.
11. Pouloupoulos P. Lewitz B. Straub A. Pappas S. D., Droulias S. A., **Baskoutas S.**, Fumagalli, P., (2012) *Band-gap tuning at the strong quantum confinement regime in magnetic semiconductor EuS thin films*, Applied Physics Letters **100** 211910.
12. Zeng Z. Garoufalis C.S., **Baskoutas S.**, (2012) *Combination effects of tilted electric and magnetic fields on donor binding energy in a GaAs/AlGaAs cylindrical quantum dot*, Journal of Physics D-Applied Physics **45**, 235102.
13. Zeng Z. Garoufalis C.S., **Baskoutas S.**, Terzis A. F., (2012) *Stark Effect of Donor Binding Energy in a Self-assembled GaAs Quantum Dot Subjected to a Tilted Electric Field*, accepted for publication in Physics Letters A **376**, 2712-2716.
14. G.N. Dar G.N., Umar A., Zaidi S.A., Ahmed A. Ibrahim A. A., Abaker M., **Baskoutas S.**, Al-Assiri M. S., (2012) *Ce-doped ZnO nanorods for the detection of hazardous chemical*, Sensors and Actuators B: Chemical, **173**, 72-78 .
15. Abaker M., Dar G. N., Umar A., Zaidi S. A., Ibrahim A. A., **Baskoutas S.**, and Al-Hajry A., (2012) *CuO Nanocubes Based Highly-Sensitive 4-Nitrophenol Chemical Sensor*, Science of Advanced Materials **4**, 1.

16. Zeng Z., Garoufalis C. S., **Baskoutas S.**, Terzis A. F., (2012) *Tuning the Binding Energy of Surface Impurities in Cylindrical GaAs/AlGaAs Quantum Dots by a Tilted Magnetic Field*, Journal of Applied Physics 112, 064326.
17. Khayyat S.A.;Abaker M.,Umar A.,Alkattan M.O., Alharbi N.D., (2012) **Baskoutas S.**, *Synthesis and Characterizations of Cd-Doped ZnO Multipods for Environmental Remediation Application*, Journal of Nanoscience and Nanotechnology 12, 8453-8458.
18. **Baskoutas S.**, Zeng Z., Garoufalis C.S.,Bester G., (2012) *Tuning of the Optical Emission Polarization of ZnO Nanorods by an Applied Hydrostatic Pressure*, Journal of Physical Chemistry C116, 26592-26597.
19. Azizian-Kalandaragh, Y., Khodayari A., Zeng Z., Garoufalis C.S., **Baskoutas S.**,Gontard L.C., (2013) *Strong quantum confinement effects in SnS nanocrystals produced by ultrasound-assisted method*, Journal of Nanoparticle Research 15, 1388.
20. Zeng Z., Paspalakis E.,Garoufalis C.S.,Terzis A.F., **Baskoutas S.**, (2013) *Optical susceptibilities in singly charged ZnO colloidal quantum dots embedded in different dielectric matrices*, Journal of Applied Physics 113, 054303.
21. Zeng Z., Garoufalis C.S., **Baskoutas S.**,Bester G., (2013) *Electronic and optical properties of ZnO quantum dots under hydrostatic pressure*, Phys. Rev. B 87, 125302.
22. Zeng Z., Garoufalis C.S.,Terzis A.F., **Baskoutas S.**, (2013) *Linear and nonlinear optical properties of ZnO/ZnS and ZnS/ZnO core shell quantum dots: Effects of shell thickness, impurity, and dielectric environment*, Journal of Applied Physics 114 023510.
23. Umar A.,Akhtar M.S., Badran R.I.,Abaker M., Kim S.H., Al-Hajry A., **Baskoutas S.**, (2013) *Electrical properties of solution processed p-SnS nanosheets/n-TiO₂ heterojunction assembly*, Appl. Phys. Lett. 103, 101602.
24. Umar A., Akhtar M.S., Dar G.N., Dar G. N., Abaker M., Al-Hajry A., **Baskoutas S.**, (2013) *Visible-light-driven photocatalytic and chemical sensing properties of SnS₂ nanoflakes*, Talanta 114, 183-190.
25. Paspalakis E., Boviatsis J., **Baskoutas S.**, (2013) *Effects of probe field intensity in nonlinear optical processes in asymmetric semiconductor quantum dots*, Journal of Applied Physics 114, 153107.
26. Umar A., Akhtar M.S., Dar G.N., **Baskoutas S.**, (2013) *Low-temperature synthesis of alpha-Fe₂O₃ hexagonal nanoparticles for environmental remediation and smart sensor applications*, Talanta 116 1060-1066.
27. Zeng Z., Gorgolis G., Garoufalis C.S., **Baskoutas S.**, (2014) *Competition Effects of Electric and Magnetic Fields on Impurity Binding Energy in a Disc-Shaped Quantum Dot in the Presence of Pressure and Temperature*, Science of Advanced Materials 6, 586-591.
28. Chrissanthopoulos A., Kyriazis F.C., Nikolakis V., Giannakopoulos, I.G., Dracopoulos V., **Baskoutas S.**, Bouropoulos N., Yannopoulos S.N., (2014) *ZnO/zeolite hybrid nanostructures: synthesis, structure, optical properties, and simulation*, Thin Solid Films 555, 21-27.
29. Zeng Z., Garoufalis C.S., **Baskoutas S.**, (2014) *New Insights in the Excitonic Emission of ZnS Colloidal Quantum Dots*, Journal of Physical Chemistry C 118, 10502-10508.
30. Zeng Z., Garoufalis C.S., **Baskoutas S.**, (2014) *Linear and nonlinear optical susceptibilities in a laterally coupled quantum-dot-quantum-ring system*, Physics Letters A 378, 2713-2718.
31. Zeng Z., Petoni A., Garoufalis C.S., **Baskoutas S.**, Bester G., (2015) *Near-band-edge exciton polarization change in ZnO nanowires*, Physical Chemistry Chemical Physics 17, 1197-1203.
32. Zeng Z., Garoufalis C.S., **Baskoutas S.**, Bester G., (2015) *Excitonic optical properties of wurtzite ZnS quantum dots under pressure*, Journal of Chemical Physics 142, 114305.
33. Kim S.H.,Ibrahim A.A., Kumar R., Umar A., Abaker M., Hwang S.W., **Baskoutas S.**, (2016) *Synthesis and Characterization of Mimosa Pudica Leaves Shaped alpha-Iron Oxide Nanostructures for Ethanol Chemical Sensor Applications*, Journal of Nanoscience and Nanotechnology 16, 2944-2949.
34. Zeng Z., Garoufalis C.S., **Baskoutas S.**, (2016) *Nonlinear optical absorption in colloidal CdS quantum dots: The role of dielectric environment*, Journal of Nanoelectronics and Optoelectronics (accepted).
35. Umar A., Ahmad R., Kumar R., Ibrahim A.A., **Baskoutas S.**, (2016) *Bi₂O₃ nanoplates: Fabrication and characterization of highly sensitive and selective cholesterol biosensor*, Journal of Alloys and Compounds 683, 433-438.
36. Umar A., Lee J.H., Kumar R., Al-Dossary O., Ibrahim A.A., **Baskoutas S.**, (2016) *Development of highly sensitive and selective ethanol sensor based on lance-shaped CuO nanostructures*, Materials & Design 105, 16-24.

37. Ibrahim A. A., Umar A, Kumar R.,⁴, Kim S.H., **Baskoutas S.**, (2016) *Sm₂O₃ doped ZnO beech fern hierarchical structures for nitroaniline chemical sensor*, Ceramics International, to be published.
38. Ibrahim A. A., Umar A., Ahmad P., Kumar P., and **Baskoutas S.**, (2016) *Fabrication and Characterization of Highly Sensitive and Selective Glucose Biosensor Based on ZnO Decorated Carbon Nanotubes*, Nanosci. Nanotechnol. Lett., to be published.
39. Ibrahim AA, Umar A, **Baskoutas S** (2017) *Ytterbium Doped Zinc Oxide Nanopencils for Chemical Sensor Application*, Journal of Nanoscience and Nanotechnology 17 (12), 9157-9162.
40. Umar A., Kim S.H., Kumar R., Al-Assiri M. S., Al-Salami AE, Ibrahim AA, **Baskoutas S.**, (2017) *In-Doped ZnO Hexagonal Stepped Nanorods and Nanodisks as Potential Scaffold for Highly-Sensitive Phenyl Hydrazine Chemical Sensors*, Materials 10 (11), 1337.
41. Koliogiorgos A., **Baskoutas S.**, Galanakis I., (2017) *Electronic and gap properties of lead-free perfect and mixed hybrid halide perovskites: An ab-initio study*, Computational Materials Science 138, 92-98.
42. **Baskoutas S.**, Zeng Z., Garoufalis C. S., Bester G., (2017) *Morphology control of exciton fine structure in polar and nonpolar zinc sulfide nanorods*, Scientific Reports 7 (1), 9366.
43. Ibrahim AA., Tiwari P., Al-Assiri MS, Al-Salami AE, Umar A, Kumar R., Kim SH, Ansari ZA, **Baskoutas S.**, (2017) *A Highly-Sensitive Picric Acid Chemical Sensor Based on ZnO Nanopeanuts*, Materials 10 (7), 795.
44. Ibrahim AA, Ahmad R., Umar A., Al-Assiri MS, Al-Salami AE, Kumar Rajesh, Ansari SG, **Baskoutas S.**, (2017) *Two-dimensional ytterbium oxide nanodisks based biosensor for selective detection of urea*, Biosensors and Bioelectronics 98, 254-260.
45. Al-Hadeethi Y., Umar A, Ibrahim A. A., Al-Heniti S. H., Kumar R., **Baskoutas S.**, Raffah B. M. (2017) *Synthesis, characterization and acetone gas sensing applications of Ag-doped ZnO nanoneedles*, Ceramics International 43 (9), 6765-6770.
46. Garoufalis CS, Pouloupoulos P, Bouropoulos N, Barnasas A, **Baskoutas S.** (2017) *Growth and optical properties of Fe₂O₃ thin films: A study of quantum confinement effects by experiment and theory*, Physica E: Low-dimensional Systems and Nanostructures 89, 67-71.
47. Ibrahim A., Umar A., Kumar R., Al-Assiri M., Al-Salami A.E., **Baskoutas S.** (2017) *Highly sensitive and selective non-enzymatic mono and disaccharide sugars sensing based on carbon paste electrodes modified with perforated NiO nanosheets*, accepted for publication in New Journal of Chemistry.
48. Zhou Q, Umar A, Amine A, Xu L, Gui Y, Ibrahim AA, Kumar R, Baskoutas S (2017), *Fabrication and characterization of highly sensitive and selective sensors based on porous NiO nanodisks*, accepted for publication in Sensors and Actuators B: Chemical.
49. Hayrapetyan D.B., Ohanyan G.L., Baghdasaryan D.A., Sarkisyan H.A. **Baskoutas S.**, Kazaryan E.M., (2018) *Binding energy and photoionization cross-section of hydrogen-like donor impurity in strongly oblate ellipsoidal quantum dot*, Physica E: Low-dimensional Systems and Nanostructures 95, 27-31.
50. Zeng Z., Garoufalis C.S., **Baskoutas S.**, Jia Y., Bester G., (2018) *Realization of linearly polarized exciton emission in wurtzite zinc oxide quantum dots*, Physical Review B 98, 235410.
51. Koliogiorgos A., Garoufalis C.S., Galanakis I., **Baskoutas S.**, *Electronic and Optical Properties of Ultrasmall ABX₃ (A = Cs, CH₃NH₃/B = Ge, Pb, Sn, Ca, Sr/X = Cl, Br, I) Perovskite Quantum Dots*, (2018) ACS Omega 3, 18917-18924.
52. Garoufalis C.S., Barnasas A., Stamatelatos A., Karoutsos V., Grammatikopoulos, S., Pouloupoulos P., **Baskoutas S.**, *A Study of Quantum Confinement Effects in Ultrathin NiO Films Performed by Experiment and Theory* (2018) Materials 11, 949.
53. **Baskoutas S.**, *Special Issue: Zinc Oxide Nanostructures: Synthesis and Characterization*, (2018) Materials 11, 873.
54. Zhou Q., Umar A., Sodki El Mehdi, Amine A., Xu L., Gui Y., Ibrahim A.A., Kumar, R., **Baskoutas S.**, *Fabrication and characterization of highly sensitive and selective sensors based on porous NiO nanodisks* (2018) Sensors and Actuators B-Chemical 259, 604-615.
55. Koliogiorgos A., **Baskoutas S.**, Galanakis I., *Electronic and gap properties of Sb and Bi based halide perovskites: An abinitio study* (2018) Computational Condensed Matter 14, 161-166.
56. Chaudhary S., Umar A., Bhasin K. K., **Baskoutas S.**, *Chemical Sensing Applications of ZnO Nanomaterials* (2018) Materials 11, 287.
57. Ibrahim A. A., Sodki E. M., Umar A., Amine A., Kumar R., Al-Assiri M. S., Al-Salami A. E., **Baskoutas S.**, *Highly sensitive and selective non-enzymatic monosaccharide and disaccharide*

sugar sensing based on carbon paste electrodes modified with perforated NiO nanosheets (2018) New Journal of Chemistry 42, 964-973.

58. Hayrapetyan D. B., Bleyan Y. Y., Baghdasaryan D. A., Sarkisyan H. A., **Baskoutas S.**, Kazaryan E. M., *Biexciton, negative and positive trions in strongly oblate ellipsoidal quantum dot* (2019) Physica E 105, 47-55.
59. Umar A., Ibrahim A. A., Kumar R., Almas T., Al-Assiri M. S., **Baskoutas S.**, *Nitroaniline chemi-sensor based on bitter gourd shaped ytterbium oxide (Yb₂O₃) doped zinc oxide (ZnO) nanostructures* (2019) Ceramics International 45, 13825-13831.
60. Umar A., Akhtar M. S., Almas T., Ibrahim A. A., Al-Assiri M. S., Mohammed S., Masuda, Y., Rahman Q. I., **Baskoutas S.**, *Direct Growth of Flower-Shaped ZnO Nanostructures on FTO Substrate for Dye-Sensitized Solar Cells* (2019) Crystals 9, 405.
61. Garoufalis C. S., Zeng Z., Bester G., Hayrapetyan D. B., **Baskoutas S.**, *Optical properties of zig-zag and armchair ZnO colloidal nanoribbons* (2019) Chemical Physics Letters 732, 136659.
62. Ma X., Min J., Zeng Z., Garoufalis C. S., **Baskoutas S.**, Jia Y., Du Z., *Excitons in InP, GaP, and GaxIn1-xP quantum dots: Insights from time-dependent density functional theory*, (2019) Physical Review B100, 245404.
63. Umar A. Ammar H.Y., Kumar R., Almas T., Ibrahim A.A., Al-Assiri M. S., Abaker M., **Baskoutas S.**, *Efficient H₂ gas sensor based on 2D SnO₂ disks: Experimental and theoretical studies* (2019) International Journal of Hydrogen Energy (IN PRESS).
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Total number of publications: 150. For a complete list of publications please see: <https://scholar.google.gr/citations?user=t92GIOgAAAAJ&hl=el>

Citations

SOURCE: **Web of Science**

Total Publications **136**

h-index **38**

Sum of Times Cited **4223**

SOURCE: **Google Scholar**

	All	Since 2015
<u>Citations</u>	5015	2794
<u>h-index</u>	39	28