


1. Name and Address

	<p>Dr. Suresh Kumar Kailasa</p> <p>Associate Professor & Head Department of Chemistry Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat – 395 007, Gujarat, INDIA</p> <p>E-mail: sureshkumarchem@gmail.com; skk@chem.svnit.ac.in Phone: +91-261-2201730 (O); Mobile: 9033369827 Website: http://www.svnit.ac.in/web/department/applied_chemistry/faculty_acd.php</p>
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2. Principal Research Interests

Our group focuses on the fundamental and applied problems in analytical, bioanalytical and environmental sciences using a diverse set of functional nanomaterials integrated analytical techniques. We design and fabricate functional nanomaterials to study their outstanding optical properties with various applications ranging from bioimaging to drug delivery and nanosensors (colorimetric and fluorescent probes). Additionally, our group also focuses on the green synthetic approaches for the fabrication of functional nanomaterials and their analytical applications and biological activities. Another major focus in the groups is on the applications of MALDI- and ESI- MS techniques for detection of biomolecules.

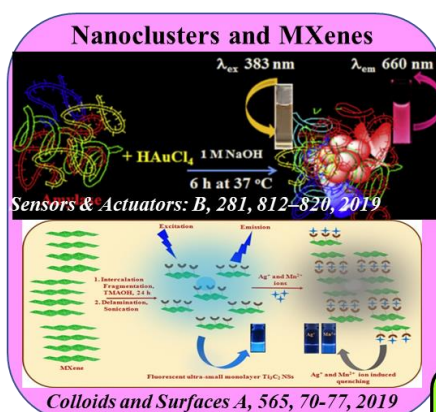
Research Areas:	Miniaturized Extraction Techniques and Capillary Electrophoresis	
Functional Nanomaterials	MALDI- and ESI- MS	Plasmonic and Fluorescent Nanosensors
Biosensing & Bioimaging	Drug Delivery	Green and Environmental Chemistry

Nanoclusters and MXenes

λ_{ex} 383 nm λ_{em} 660 nm

+ HAuCl₄ 1 M NaOH
6 h at 37 °C

Sensors & Actuators B, 281, 812–820, 2019



Fluorescent ultra small nanocluster (AuCl₄)₃N₃ Ag⁺ and Mn²⁺ ions induced quenching

Colloids and Surfaces A, 565, 70–77, 2019

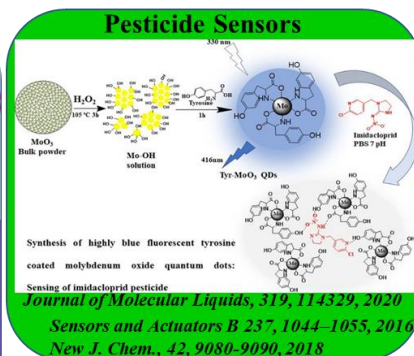
Pesticide Sensors

350 nm 416 nm

MoO₃ Bulk powder
Mo OH solution
Tyrosine
Imidacloprid PDB 7 pH

Synthesis of highly blue fluorescent tyrosine coated molybdenum oxide quantum dots:
Sensing of imidacloprid pesticide

Journal of Molecular Liquids, 319, 114329, 2020
Sensors and Actuators B 237, 1044–1055, 2016
New J. Chem., 42, 9080–9090, 2018



Colorimetric sensing of drugs

410 nm 478 nm

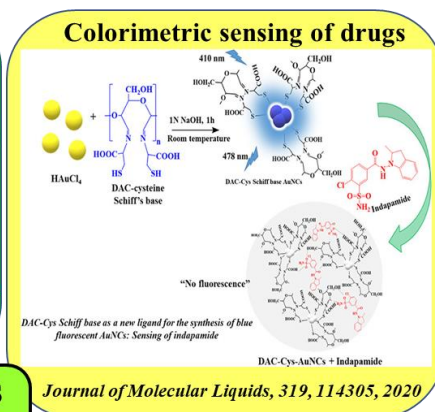
HAuCl₄ DAC-cysteine Schiff's base
IN NaOH, 1h
Room temperature

DAC-Cys Schiff base AuNCs
DAC-Cys Schiff base AuNCs
DAC-Cys-AuNCs + Indapamide

"No fluorescence"

DAC-Cys Schiff base as a new ligand for the synthesis of blue fluorescent AuNCs: Sensing of indapamide

Journal of Molecular Liquids, 319, 114305, 2020



Functional Nanomaterials & Analytical Chemistry Research Lab

Biosensing/Biomarkers

Lysozyme-Au-Mo NCs
Bilirubin

0.325 μM
500 μM

Emission spectra of Lysozyme-Au-Mo NCs with bilirubin

ACS Appl. Nano Mater. 4, 11, 11949–11959, 2021

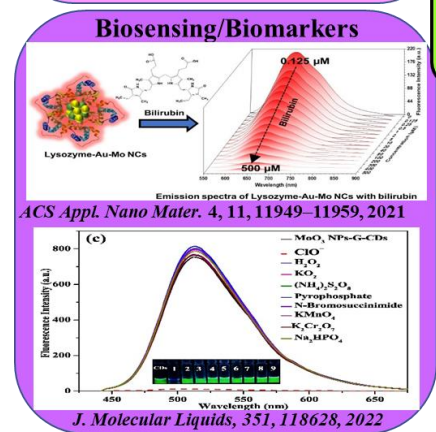
(c)

Fluorescence intensity (a.u.)

Wavelength (nm)

- MoO₃ NPs-G-Cds
- ClO₄⁻
- H₂O₂
- K₂O₂
- (NH₄)₂S₂O₈
- Pyrophosphate
- N-Bromosuccinimide
- KMnO₄
- K₂C₂O₄
- Na₂HPO₄

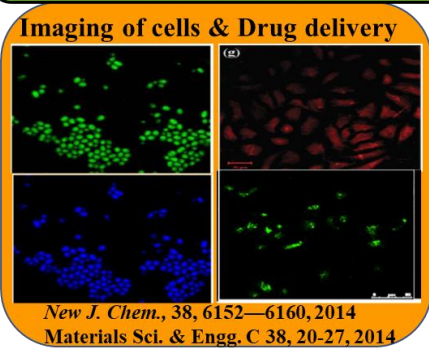
J. Molecular Liquids, 351, 118628, 2022



Imaging of cells & Drug delivery

(a) (b)

New J. Chem., 38, 6152–6160, 2014
Materials Sci. & Engg. C 38, 20–27, 2014



Green Chemistry: Fluorescent carbon dots

350 nm 443 nm

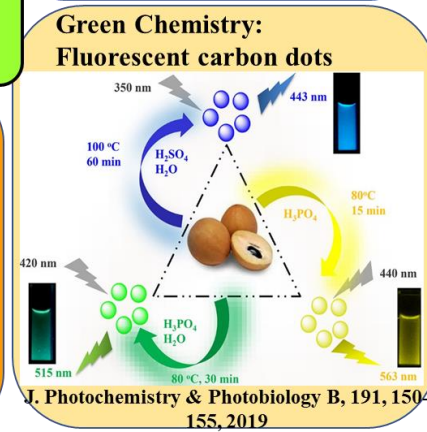
100 °C 60 min
H₂SO₄
H₂O

80 °C 15 min
H₃PO₄

80 °C, 30 min
H₃PO₄
H₂O

420 nm 515 nm 440 nm 563 nm

J. Photochemistry & Photobiology B, 191, 150–155, 2019



3. Educational Qualifications:

Degree	Subject	College/University	Year
B.Sc.	Botany, Zoology, Chemistry	V. R. College, Nellore, A.P., India	1999 (63.8%)
M.Sc.	Chemistry of Natural Products	S. K. U. P. G. Center, Kurnool, A.P., India	2001 (71.5%)
Ph.D.	Chemistry	Sri Venkateswara University, Tirupati, A.P., India	2005

PhD Thesis Title: "Analysis of Organic Pollutants in Environmental Samples (Carbamate Pesticides)"

4a. Awards:

- Young Scientist and Travel Winner Award by Taiwan Society for Mass Spectrometry, at 4th Asia Oceania Mass Spectrometry Conference and 10th Taiwan Society for Mass Spectrometry Annual Conference (4th AOMSC & 10th TSMS Annual Conference), Taipei, July 8-12, 2013.
- Young Scientist Award by National Environmental Science Academy, New Delhi, India (2008).
- Brainpool Scientist, Chung-Ang University, Seoul, South Korea (August 2017 – December 2017).
- Fellow of Society of Pesticide Science India, Division of Agricultural Chemicals, Indian Agricultural Research Institute, New Delhi, 2019.
- Fellow of the Royal Society of Chemistry (FRSC), Royal Society of Chemistry, UK, 2021.
- Selected as a Life Member in The National Academy of Sciences, India (NASI), India, 2021.

4b. Honors:

- Visiting Scientist, Department of Chemistry, National Sun Yat-sen University, Taiwan (2010).
- Research Professor, Chung-Ang University, Seoul, South Korea (January 2018 – September 2018)
- Editorial Board Member, Journal of Integrated OMICS.
- Visiting Research Professor, Chung-Ang University, Seoul, South Korea (May 2019 – July 2019)
- Guest Editor for Special Issue "Nanocomposites for the Sustainable Environment" in Applied Sciences (IF: 2.21),
https://www.mdpi.com/journal/applsci/special_issues/nanocomposites_sustainable
- Guest Editor for Special Issue "Chemical Sciences in Sustainable Technology and Development" in Materials Today Chemistry, Elsevier, (IF: 8.30)

5a. Professional Experience (in India):

Position	Period	Institution	Nature of work
Associate Professor	28.01.2019 – Present	SVNIT, Surat	Teaching and Research
Assistant Professor	27.03.2009 – 27.01.2019	SVNIT, Surat	Teaching and Research
Scientist (Analytical Division)	January 2006 – August 2006	Sami Labs Limited, Bangalore	Quality control

5b. Professional Experience (Abroad)

Position	Institution	Period
Visiting Research Professor	Chung-Ang University, South Korea	May 2019 – July 2019
Research Professor	Chung-Ang University, South Korea	January 2018 – September 2018
Brainpool Scientist	Chung-Ang University, South Korea	August 2017 – December 2017
Visiting Scientist	National Sun Yat-Sen University, Taiwan	February 2010 – September 2010
Post-doctoral Fellow	National Sun Yat-Sen University, Taiwan	February 2008 – March 2009
Post-doctoral Fellow	Chonbuk National University, South Korea	September 2006 – September 2007

5c. Administrative work

- Head, Department of Chemistry, SVNIT, Surat, since February 2021.
- Professor In-charge, New Class Room Complex, SVNIT, Surat since 2015.
- Chief Warden, Nehru Bhavan Hostel, SVNIT, Surat since 16th March 2019 – 15th March 2021.

6a. Publication details (Appendix – I & II)

International Journal Publications	184	Book chapters	23	Edited Books	03
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6695 citations as of May 2022. h-index: 45; i10-index: 145

<https://scholar.google.com/citations?user=ybF8xZYAAAAAJ&hl=en>

6b. Research guidance (Appendix – III & IV)

Ph.D	Completed: 05 (As Supervisor), 01 (As Co-supervisor)	On-going: 10 (As Supervisor) 02 (As Co-supervisor)
M.Sc	Completed: 24	On-going: 02

6c. Research Projects (Appendix –V)

Completed: 05 (DST, BRNS, SVNIT, DRDO)	On-going: 00
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6a. Appendix – I (List of Publications)

184. S. V. Atulbhai, R. K. Singhal, H. Basu and S. K. Kailasa, Perspectives of different color emissive nanomaterials in fluorescent ink, LEDs, cell imaging and sensing of various analytes, **Luminescence, In press, 2022 (IF: 2.46)**
183. P. M. Revabhai, R. K. Singhal, H. Basu and S. K. Kailasa, Progress on boron nitride nanostructure materials: Properties, synthesis and applications in hydrogen storage and analytical chemistry, **Journal of Nanostructure in Chemistry, In press, 2022 (IF: 6.39)**
182. V. N. Mehta, N. Ghiniaya, R. K. Singhal, H. Basu, S. K. Kailasa, Ligand chemistry of gold, silver and copper nanoparticles for visual read-out assay of pesticides: A review, **Trends in Analytical Chemistry**, 153, 116607, 2022 (IF: 12.29)
181. D. Joshi, N. I. Malek, S. K. Kailasa, Borophene as a rising star in materials chemistry: Synthesis, properties and applications in analytical science and energy devices, **New Journal of Chemistry**, 46, 4514-4533, 2022 (IF: 3.59)
180. O. Prakash, A. Mungray, A. K. Mungray, S. K. Kailasa, A novel design for the development of deployable benthic microbial fuel cells using PPy-Fe₂O₃ coated multi-anode system, **Sustainable Energy Technologies and Assessments**, 52, 102049, 2022 (IF: 5.35)
179. S. K. Kailasa, D. J. Joshi, M. R. Kateshiya, J. R. Koduru, N. I. Malek, Review on the biomedical and sensing applications of nanomaterial-incorporated hydrogels, **Materials Today Chemistry**, 23, 100746, 2022 (IF: 8.30)
178. S. K. Kailasa, J. R. Koduru, Perspectives of magnetic nature carbon dots in analytical chemistry: From separation to detection and bioimaging, **Trends in Environmental Analytical Chemistry** 33, e00153, 2022, (IF: 9.60)
177. M. R. Kateshiya, N. I. Malek, S. K. Kailasa, Green fluorescent carbon dots functionalized MoO₃ nanoparticles for sensing of hypochlorite, **Journal of Molecular Liquids** 351, 118628, 2022 (IF: 6.16)
176. M. R. Kateshiya, N. I. Malek, S. K. Kailasa, Folic acid functionalized molybdenum oxide quantum dots for the detection of Cu²⁺ ion and alkaline phosphatase via fluorescence turn off–on mechanism, **Spectrochimica Acta Part A**, 268, 120659, 2022 (IF: 4.09)

175. **S. K. Kailasa**, S. Borse, J. R. Koduru, Z. V. P. Murthy, Biomolecules as promising ligands in the synthesis of metal nanoclusters: Sensing, bioimaging and catalytic applications, **Trends in Environmental Analytical Chemistry** 32, e00140, **2021 (IF: 9.60)**
174. **S. K. Kailasa**, D. J. Joshi, J. R. Koduru, N. I. Malek, Review on MXenes-based nanomaterials for sustainable opportunities in energy storage, sensing and electrocatalytic reactions, **Journal of Molecular Liquids** 342, 117524, **2021 (IF: 6.16)**
173. D. J. Joshi, J. R. Koduru, N. I. Malek, C. M. Hussain, **S. K. Kailasa**, Surface modifications and analytical applications of graphene oxide: a review, **Trends in Analytical Chemistry** 144, 116448, **2021 (IF: 12.29)**
172. **S. K. Kailasa**, G. N. Vajubhai, J. R. Koduru, T. J. Park, C. M. Hussain, Recent progress on the modifications of ultra-small perovskite nanomaterials for sensing applications, **Trends in Analytical Chemistry** 144, 116432, **2021 (IF: 12.29)**
171. M. Jain, A. Marfatia, N. Imam, D. Ray, V. K. Aswal, N. Y. Patel, V. H. Raval, **S. K. Kailasa**, N. I. Malek, Ionic liquid-based catanionic vesicles: A de novo system to judiciously improve the solubility, stability and antimicrobial activity of curcumin, **Journal of Molecular Liquids**, **336**, **116239**, **2021 (IF: 6.16)**
170. S. Borse, Z. V. P. Murthy, T. J. Park, **S. K. Kailasa**, Lysozyme-Decorated Gold and Molybdenum Bimetallic Nanoclusters for the Selective Detection of Bilirubin as a Jaundice Biomarker, **ACS Appl. Nano Mater.**, 4, 11, 11949–11959, **2021 (IF: 5.09)**
169. P. Surti, **S. K. Kailasa**, A. K. Mungray, Genetic engineering strategies for performance enhancement of bioelectrochemical systems: A review, **Sustainable Energy Technologies and Assessments** 47, 101332, **2021 (IF: 5.35)**
168. S. M. Rajput, K. Gangele, K. M. Poluri, D. Ray, V. K. Aswal, **S. K. Kailasa**, N. I. Malek, Drug induced catanionic vesicles assisted fabrication of hollow silica nano-spheres as the new age chemo-drug carrier, **Colloid and Interface Science Communications** 44, 100466, **2021 (IF: 4.91)**
167. S. Ghosh, A. R. Gul, C. Y. Park, M. W. Kim, P. Xu, S. H. Baek, J. R. Bhamore, **S. K. Kailasa**, T. J. Park, Facile synthesis of carbon dots from Tagetes erecta as a precursor for determination of chlorpyrifos via fluorescence turn-off and quinalphos via fluorescence turn-on mechanisms, 279,130515, **Chemosphere**, **2021 (IF: 7.08)**
166. M. L. Desai, H. Basu, S. Saha, R. K. Singhal, **S. K. Kailasa**, Fluorescence enhancement of bovine serum albumin gold nanoclusters from La³⁺ ion: detection of four divalent metal ions (Hg²⁺, Cu²⁺, Pb²⁺ and Cd²⁺), **Journal of Molecular Liquids**, **336**, **116239**, **2021 (IF: 5.06)**
165. S. Ghosh, A. R. Gul, C. Y. Park, P. Xu, S. H. Baek, J. R. Bhamore, M. W. Kim, M. Lee, **S. K. Kailasa**, T. J. Park, Green synthesis of carbon dots from Calotropis procera leaves for trace level identification of isoprothiolane, **Microchemical Journal**, **167**, 106272, **2021 (IF: 4.82)**
164. V. N. Mehta, M. L. Desai, H. Basu, R. K. Singhal and **S. K. Kailasa**, Recent developments on fluorescent hybrid nanomaterials for metal ions sensing and bio-imaging applications: A review, **Journal of Molecular Liquids**, **333**, **115950**, **2021 (IF: 5.06)**
163. V. Dhavle, M. R. Kateshiya, T. J. Park, and S. K. Kailasa, Functionalization of silver nanoparticles with carbohydrate derivative for colorimetric assay of thiram", **Journal of Electronic Materials**, 50, 3676–3685, **2021, (IF: 1.77)**
162. S. Akavaram, M. L. Desai, T. J. Park, Z. V. P. Murthy, **S. K. Kailasa**, Trypsin encapsulated gold-silver bimetallic nanoclusters for recognition of quinalphos via fluorescence quenching and of Zn²⁺ and Cd²⁺ ions via fluorescence enhancement, **Journal of Molecular Liquids**, **327**, **114830**, **2021 (IF: 5.06)**
161. J. R. Bhamore, A. R. Gul, **S. K. Kailasa**, K.-W. Kim, J. S. Lee, H. Park, T. J. Park, Functionalization of gold nanoparticles using guanidine thiocyanate for sensitive and selective visual detection of Cd²⁺, **Sensors and Actuators B: Chemical**, **334**, **129685**, **2021 (IF: 7.10)**
160. **S. K. Kailasa**, V. N. Mehta, J. R. Koduru, H. Basu, R. K. Singhal, Z.V.P. Murthy and T. J. Park, An overview of molecular biology and nanotechnology-based analytical methods for the

- detection of SARS-CoV-2: Promising biotools for the rapid diagnosis of COVID-19, **Analyst**, 146, 1489-1513, **2021 (IF: 3.97)**
159. S. Borse, ZVP. Murthy, T.J. Park, **S. K. Kailasa**, Pepsin mediated synthesis of blue fluorescent copper nanoclusters for sensing of flutamide and chloramphenicol drugs, **Microchemical Journal**, 164, 105947, **2021 (IF: 3.59)**
 158. **S. K. Kailasa**, J. R. Koduru, T. J. Park, R. K. Singhal, H. F. Wu, Applications of single-drop microextraction in analytical chemistry: A review, *Trends in Environmental Anal. Chem.*, 29, e00113, **2021. (IF: 7.05)**
 158. B. S. Giri, S. Geed, K. Vikrant, S. S. Lee, K. H. Kim, **S. K. Kailasa**, M Vithanage, P. Chaturvedi, B. N. Rai, R. S. Singh, Progress in bioremediation of pesticide residues in the environment, **Environmental Engineering Research**; 26(6): 200446, **2021.**
 157. H. Basu, S. Saha, **S. K. Kailasa**, R. K. Singhal, Present status of hybrid material for potable water decontamination: A Review, **Environ. Sci.: Water Res. Technol.**, 6, 3214-3248, **2020. (IF: 3.44)**
 156. M.R. Kateshiya, N.I. Malek, **S. K. Kailasa**, Facile synthesis of highly blue fluorescent tyrosine coated molybdenum oxide quantum dots for the detection of imidacloprid pesticide, **Journal of Molecular Liquids**, **319, 114329, 2020 (IF: 5.06)**
 155. **S. K. Kailasa**, M. R. Kateshiya, N. I. Malek, Introduction of cellulose-cysteine Schiff base as a new ligand for the fabrication of blue fluorescent gold nanoclusters for the detection of indapamide drug, **Journal of Molecular Liquids** 319, 114305, **2020, (IF: 5.06)**
 154. **S. K. Kailasa**, J. R. Koduru, S. H. Baek, H. F. Wu, C. M. Hussain, T. J. Park, Review on matrix-assisted laser desorption/ionization time-of-flight mass spectrometry for the rapid screening of microbial species: A promising bioanalytical tool, **Microchemical Journal**, 159, 105387, **2020, (IF: 3.59).**
 153. O. Prakash, A. Mungray, S. Chongdar, **S. K. Kailasa**, A. K. Mungray, Performance of polypyrrole coated metal oxide composite electrodes for benthic microbial fuel cell (BMFC), **Journal of Environmental Chemical Engineering** 8 (2), 102757, **2020 (IF: 4.30)**
 152. M. W. Kim, H.-J. Park, C. Y. Park, J. H. Kim, C. H. Cho, L. M. T. Phan, J. P. Park, **S. K. Kailasa**, C.-H. Lee, T. J. Park, Fabrication of a paper strip for facile and rapid detection of bovine viral diarrhea virus via signal enhancement by copper polyhedral nanoshells, **RSC Adv.**, 10, 29759-29764, **2020, (IF: 3.11)**
 151. J. R. Bhamore, A. R. Gul, W. S. Chae, K. W. Kim, J. S. Lee, H. Park, **S. K. Kailasa**, T. J. Park, One-pot fabrication of amino acid and peptide stabilized gold nanoclusters for the measurement of the lead in plasma samples using chemically modified cellulose paper, **Sensors and Actuators B: Chemical**, **322, 128603, 2020 (IF: 7.10)**
 150. S. M. Rajput, M. Kuddushi, A. Shah, D. Ray, V. K. Aswal, **S. K. Kailasa**, N. I. Malek. Functionalized surfactant based cationic vesicles as the soft template for the synthesis of hollow silica nanospheres as new age drug carrier, **Surfaces and Interfaces**, 20, 100596, **2020 (IF: 3.72)**
 149. M. R. Kateshiya, G. George, J. V. Rohit, N. I. Malek, **S. K. Kailasa**, Ractopamine as a novel reagent for the fabrication of gold nanoparticles: Colorimetric sensing of cysteine and Hg²⁺ ion with different spectral characteristics, **Microchemical Journal**, 158, 105212, **2020. (IF: 3.20)**
 148. S. Borse, Z. V. P. Murthy, **S. K. Kailasa**, Chicken egg white mediated synthesis of platinum nanoclusters for the selective detection of carbidopa, **Optical Materials**, 107, 110085, **2020. (IF: 2.68)**
 147. R. Meena, V. N. Mehta, J. R. Bhamore, P. T. Rao, T. J. Park, **S. K. Kailasa**, Diaminodiphenyl sulfone as a novel ligand for synthesis of gold nanoparticles for simultaneous colorimetric assay of three trivalent metal cations (Al³⁺, Fe³⁺ and Cr³⁺), **Journal of Molecular Liquids**, 312, 113409, **2020. (IF: 4.56)**
 146. B. Liu, K. Vikrant, K.H. Kim, V. Kumar, **S. K. Kailasa**, Critical role of water stability in metal-organic frameworks and advanced modification strategies for the extension of their applicability, **Environmental Science: Nano**, 7, 1319-1347, **2020. (IF: 7.70)**

145. J.R. Bhamore, T.J. Park, **S.K. Kailasa**, Glutathione-capped *Syzygium cumini* carbon dot-amalgamated agarose hydrogel film for naked-eye detection of heavy metal ions, **Journal of Analytical Science and Technology**, 11, 1-9, **2020**. (IF: 1.51)
144. G.D. Anilbhai, M.L. Desai, N. I. Malek, **S. K. Kailasa**, Fluorescence detection of Fe³⁺ ion using ultra-small fluorescent carbon dots derived from pineapple (*Ananas comosus*): Development of miniaturized analytical method, **Journal of Molecular Structure**, 1216, 128343, **2020**. (IF: 2.12)
143. M.L. Desai, H. Basu, S. Saha, R.K. Singhal, **S.K. Kailasa**, One pot synthesis of fluorescent gold nanoclusters from Curcuma longa extract for independent detection of Cd²⁺, Zn²⁺ and Cu²⁺ ions with high sensitivity, **Journal of Molecular Liquids**, 304, 112697, **2020**. (IF: 4.56)
142. S. H. Baek, C. Y. Park, T. P. Nguyen, M. W. Kim, J. P. Park, C. Choi, S. Y. Kim, **S. K. Kailasa**, T. J. Park, Novel peptides functionalized gold nanoparticles decorated tungsten disulfide nanoflowers as the electrochemical sensing platforms for the norovirus in an oyster, **Food Control**, 114, 107225, **2020**. (IF: 4.24)
141. M. L. Desai, S. Jha, H. Basu, S. Saha, R. K. Singhal, **S. K. Kailasa**, Simple hydrothermal approach for synthesis of fluorescent molybdenum disulfide quantum dots: Sensing of Cr³⁺ ion and cellular imaging, **Materials Science and Engineering: C**, 111, 110778, **2020**. (IF: 4.95)
140. M. Ashrafzadeh, R. Mohammadinejad, **S. K. Kailasa**, Z. Ahmadi, E. G. Afshar, A. Pardakhty, Carbon dots as versatile nanoarchitectures for the treatment of neurological disorders and their theranostic applications: A review, **Advances in Colloid and Interface Science**, 278, 102123, **2020**. (IF: 8.24)
139. M.R. Kateshiya, N.I. Malek, Z.V.P. Murthy, **S.K. Kailasa**, Designing of glutathione-lactose derivative for the fabrication of gold nanoclusters with red fluorescence: Sensing of Al³⁺ and Cu²⁺ ions with two different mechanisms, **Optical Materials**, 100, 109704, **2020**. (IF: 2.68)
138. S.H. Baek, J. Roh, C.Y. Park, M.W. Kim, R. Shi, **S. K. Kailasa**, T. J. Park, Cu-nanoflower decorated gold nanoparticles-graphene oxide nanofiber as electrochemical biosensor for glucose detection, **Materials Science and Engineering: C** 107, 110273, **2020**. (IF: 4.95)
137. R. Rafique, A. R. Gul, I. G. Lee, S. H. Baek, **S. K. Kailasa**, N. Iqbal, E. J Cho, M. Lee, T. J. Park, Photo-induced reactions for disassembling of co-loaded photosensitizer and drug molecules from upconversion-mesoporous silica nanoparticles: An effective synergistic cancer therapy, **Materials Science and Engineering: C**, 110, 110545, **2020**. (IF: 4.95)
136. **S.K. Kailasa**, J.R. Koduru, K. Vikrant, Y.F. Tsang, R.K. Singhal, C.M. Hussain, K.H. Kim, Recent progress on solution and materials chemistry for the removal of hydrogen sulfide from various gas plants, **Journal of Molecular Liquids**, 297, 111886, **2020**. (IF: 4.56)
135. Om Prakash, A. Mungray, S. Chongdar, **S. K. Kailasa**, A. K. Mungray, Performance of polypyrrole coated metal oxide composite electrodes for benthic microbial fuel cell (BMFC), **Journal of Environmental Chemical Engineering**, 8, 102757, **2020**.
134. **S. K. Kailasa**, T.P. Nguyen, S.H. Baek, R. Rafique, T.J. Park, Assembly of 6-aza-2-thiothymine on gold nanoparticles for selective and sensitive colorimetric detection of pencycuron in water and food samples, **Talanta**, 205, 120087, **2019**. (IF: 4.91)
133. M.L. Desai, S. Jha, H. Basu, R.K. Singhal, T.J. Park, **S. K. Kailasa**, Acid oxidation of muskmelon fruit for the fabrication of carbon dots with specific emission colors for recognition of Hg²⁺ ions and cell imaging, **ACS omega** 4 (21), 19332-19340, **2019**. (IF: 2.58)
132. M.L. Desai, H. Basu, S. Saha, R. K. Singhal, **S. K. Kailasa**, Investigation of silicon doping into carbon dots for improved fluorescence properties for selective detection of Fe³⁺ ion, **Optical Materials**, 96, 109374, **2019**. (IF: 2.68)
131. R. Rafique, **S. K. Kailasa**, T. J. Park, Recent advances of upconversion nanoparticles in theranostics and bioimaging applications, **Trends in Analytical Chemistry**, 120, 115646, **2019**. (IF: 8.42)
130. S. Ghosh, J. R. Bhamore, N. I. Malek, Z. V. P. Murthy, **S. K. Kailasa**, Trypsin mediated one-pot reaction for the synthesis of red fluorescent gold nanoclusters: sensing of multiple analytes

- (carbidopa, dopamine, Cu²⁺, Co²⁺ and Hg²⁺ ions), **Spectrochimica Acta Part A**, 215, 209-217, **2019**. (IF: 2.93)
129. **S. K. Kailasa**, S. Ha, S. H. Beak, L. M. T. Phan, S. Kim, K. Kwak, T. J. Park, Tuning of carbon dots emission color for sensing of Fe³⁺ ion and bioimaging applications, **Materials Science and Engineering C**, 98, 834-842, **2019**. (IF: 4.95)
 128. J. R. Bhamore, Z.V.P. Murthy, **S.K. Kailasa**, Fluorescence turn-off detection of spermine in biofluids using pepsin mediated synthesis of gold nanoclusters as a probe, **Journal of Molecular Liquids**, 280, 18-24, **2019**. (IF: 4.56)
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 2. **S. K. Kailasa**, S.H. Kang, S. Kanchi and K. Kiran, Facile and sensitive spectrophotometric determination of vanadium in various samples, **Environmental Toxicology and Pharmacology**, 24 (1), 37 – 44, **2007**. (IF: 1.29)

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6a. Appendix – II

Edited Books

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2. **S. K. Kailasa**, C. M. Hussain, Miniaturized Analytical Devices: Materials and Technology, ISBN: 978-3-527-34758-2, Wiley-VCH, Weinheim, 2022
1. C. M. Hussain, **S. K. Kailasa** Handbook of nanomaterials for sensing applications, 1st Edition, ISBN: 9780128207833, Elsevier, 2021.

(Book Chapters)

23. **S. K. Kailasa**, V. N. Mehta, J. V. Rohit, Miniaturized Capillary Electrophoresis for the Separation and Identification of Biomolecules, Chapter 01 In: S. K. Kailasa, C. M. Hussain (Eds) Miniaturized Analytical Devices: Materials and Technology, ISBN: 978-3-527-34758-2, Wiley-VCH, Weinheim, 2022.
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16. **S. K. Kailasa**, RK Singhal, H Basu, TJ Park, Surface-modified metal nanoparticles for recognition of toxic organic molecules, Chapter 16, in Handbook of Nanomaterials in Analytical Chemistry (Modern Trends in Analysis) Edited by Chaudhery Mustansar Hussain, Pages 415-432, 2020, Elsevier, ISBN: 978-0-12-816699-4
15. **S. K. Kailasa**, T.-J. Park, J. V Rohit, J. R. Koduru, Antimicrobial activity of silver nanoparticles, Chapter 14; in Nanoparticles in Pharmacotherapy, Edited by Alexandru Mihai Grumezescu, pages 461-484, 2019, William Andrew Publishing, ISBN: 978-0-12-816504-1
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13. **S. K. Kailasa**, J. R Bhamore, J. R. Koduru, T. J. Park, Carbon dots as carriers for the development of controlled drug and gene delivery systems, Chapter 11, in Biomedical

Applications of Nanoparticles, Edited by: Alexandru Mihai Grumezescu William Andrew Publishing, 295-317, 2019, ISBN: 978-0-12-816506-5

12. **S. K. Kailasa**, J. V. Rohit, R. K. Singhal, Plasmonic Nanoparticles and Quantum Dots in the Identification of Inorganic and Organic Contaminants in Food Samples, Chapter 13, in Food Preservation A volume in Nanotechnology in the Agri-Food Industry, Edited by: Alexandru Mihai Grumezescu, Academic Press, 2017, Pages 677-711, ISBN: 978-0-12-804301-1
11. **S. K. Kailasa**, V. N. Mehta, Hui-Fen Wu, Recent advances in the direct and nanomaterials-based matrix-assisted laser desorption/ionization mass spectrometric approaches for rapid characterization and identification of foodborne pathogens, Chapter 13, Edited by: A. Grumezescu, Food Preservation, Nanotechnology in the Agri-Food Industry, Pages 449-485 Academic Press, 2017, Hardcover ISBN: 978-0-12-804303-5
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9. **S. K. Kailasa**, Jigneshkumar V. Rohit, Hui-Fen Wu, Combination of Thin-Layer Chromatography with Laser Desorption Ionization- and Electrospray Ionization- Mass Spectrometric Techniques for Screening of Organic Compounds” (Chapter 15) Teresa Kowalska, Joseph Sherma, Mieczyslaw Sajewicz (Eds), Planar Chromatography - Mass Spectrometry, CRC Press/Taylor&Francis, FL, USA, Volume 110, Page No: 255 – 280, 2016. eBook ISBN: 9780429171932
8. **S. K. Kailasa**, V. N. Mehta, N. Hassan, Hui-Fen Wu, Fluorescent Carbon Dots for Bioimaging, Chapter 6, Advanced Bioelectronic Materials, Edited by: A. Tiwari, H. K. Patra and A.P.F. Turner, John Wiley & Sons, Inc., Hoboken, NJ, USA. doi: 10.1002/9781118998861.ch6.
7. **S. K. Kailasa**, Hui-Fen Wu, Jignesh Kumar, Graphene-Based Laser Desorption/Ionization Mass Spectrometry for Bioanalytical Applications Chapter 9 in Graphene Science Handbook: Applications and Industrialization. 1st Edition, Edited by Mahmood Aliofkhazraei, Nasar Ali, William I. Milne, Cengiz S. Ozkan, Stanislaw Mitura, Juana L. Gervasoni, CRC Press/Taylor&Francis, FL, USA, Page Number 105 – 125, 2016, ISBN: 9780429169359.
6. **S. K. Kailasa**, Hui-Fen Wu, Shang-Da Huang, Waste Water-Treatment Technologies and Recent Developments. Chapter 5: Recent developments on mass spectrometric techniques for pesticide analysis from waste water. In Tech Publications, 2013, 99-120. ISBN 978-953-51-0882-5.
5. **S. K. Kailasa**, Hui-Fen Wu, “Proteomic Profiling by Nanomaterials-Based Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry for High-Resolution Data and Novel Protein Information Directly from Biological Samples” Anton Posch (ed.), Proteomic Profiling: Methods and Protocols, Methods in Molecular Biology, Vol. 1295, Volume 1295 of the series Methods in Molecular Biology pp 479-496, DOI 10.1007/978-1-4939-2550-6_34, Springer Science+Business Media New York 2015. Online ISBN: 978-1-4939-2550-6
4. **S. K. Kailasa** and Hui-Fen Wu, Lysozymes: Sources, Functions and Role in Disease. Chapter 5: Functions of Lysozymes and their identification of by MALDI-MS. Nova Science Publishers, 2013, 155-169. ISBN: 978-1-62257-842-9.
3. **S. K. Kailasa**, Hui-Fen Wu, Cysteine: Biosynthesis, Chemical Structure and Toxicity. Chapter 3: Toxicity of Cysteine: Towards Biopathways. Editors: Fyodor V Chorkina, Andrey I. Karataev, Nova Science Publishers, 2012, 61-84. ISBN: 978-1-62081-386-7.
2. **S. K. Kailasa**, Hui-Fen Wu, V.N. Mehta, Quantum Dots: Applications, Synthesis and Characterization. Chapter 5: Prospects of Engineering Quantum Dots Applications in Ultrasensitive Assays, Nova Science Publishers, 2012, 69-109. ISBN: 978-1-61942-968-0.
1. **S. K. Kailasa**, Hui-Fen Wu, Inorganic Contaminants: Sample Preparation Approaches, Volume 3.37 Edited in Comprehensive Sampling and Sample Preparation (1st Edition) Edited by Pawliszyn, J.; Le, X. C.; Li, X-F.; Lee, H. K.; Eds; Elsevier, Academic Press: Oxford, UK, pp 743–782, 2012. eBook ISBN: 9780123813749

6b. Appendix – III
Ph.D Guidance On-going

S. No	Name of student	Adm. No.	Title of the Ph.D. thesis	Name of Supervisor (s)
1	Ms. Joshi Dharabhen	D19CY004	Fluorescent nanomaterials	Dr S. K. Kailasa, PI Dr Naved I Malek, Co-PI
2	Mr. Ghanaiya Nirav	D19CY006	Designing of novel fluorescent probes	Dr S. K. Kailasa
3	Mrs. Parini Surti	DS19CY003	Microbial-based fuel cells	Dr S. K. Kailasa, PI Dr A. K. Mungray, Co-PI
4	Ms. Foziyavadia	DS19CY005	Carbon dots and their applications	Dr S. K. Kailasa, PI Dr Naved I Malek, Co-PI
5	Mr. Mayur Patel	D20CY003	Novel nanostructure materials	Dr S. K. Kailasa
6	Ms. Vibhuti Sadhu	D20CY004	Green chemistry for fluorescent probes	Dr S. K. Kailasa
7	Ms. Harishita Goel	DS20CY012	Metal nanoclusters	Dr S. K. Kailasa
8	Ms. Singh Pooja	D21CY003	Course work	Dr S. K. Kailasa, PI Prof. Z. V. P. Murthy, Co-PI
9	Ms. Juhi Raval	D21CY015	Course work	Dr. S. K. Kailasa

ALUMNI

Doctoral students (Awarded/Thesis submitted)

Sr. No	Name of student	Title of the Ph.D. thesis	Year	Present position
7	Ms. Borse Shradha Kishor (D18CY004)	Design and synthesis of metal nanoclusters for detection of drugs and biomarkers (Synopsis submitted)	-	-
6.	Mr. Kateshiya Mehulkumar (D17CY004)	Surface Modifications of Nanomaterials: Synthesis, Characterization and Analytical Applications (Thesis submitted)	2022	Assistant Professor, Govt. Degree College, Gujarat
5	Dr. Desai Mittal Lallubhai (D15CY002)	One-step Synthetic Approaches for Preparation of Fluorescent Hybrid Nanomaterials: Characterization and Applications	2020	Assistant Professor, PP Savani University
4	Dr. Bhamore Jigna Rajeshkumar (D14CY002)	Synthesis and characterization of ultra-small fluorescent nanoparticles for chemical sensing and bioimaging applications	2019	Post-doctoral fellow, Chung-Ang University, South Korea
3	Dr. Jigneshkumar V. Rohit (D12CY005)	Molecular Assembly of Dithiocarbamate Derivatives on Metal (Ag and Au) Nanoparticles for Colorimetric	2017	Assistant Professor, Department of Chemistry, NIT

		Detection of Pesticides		Srinagar, Kashmir, India
2	Dr. Karuna A. Rawat (DS11CY001)	Organic framework on metal (Au and Ag) nanoparticles for colorimetric sensing of biomolecules and drugs	2016	Teaching Assistant, SVNIT, Surat, India
1	Dr. Vaibhavkumar N. Mehta (DS10CY352)	Functionalization of dithiocarbamate derivatives on metallic nanoparticles (Au and Ag) for colorimetric sensing of metal ions and green synthetic approach for preparation of carbon dots and their imaging applications	2015	Assistant Professor, Navsari Agricultural University India

Appendix – IV
(M.Sc. Students Dissertations Guided: 19)

S. No.	Name of the student	Register Number	Title of the Dissertation	Year
26	Mr. Sandesh Yele	I17CY034	Influencing factors on silver nanostructures for colorimetric sensing applications	2022
25	Ms. D. Sai Snigdha	I17CY021	Functional gold nanostructures for sensing applications	2022
24	Ms. Bhattu Swapna	I16CY010	Role of organic molecules in the synthesis and applications of carbon dots	2021
23	Mr. Potnuru Tirumala Rao	I15CY009	Synthesis of Fluorescent CDs: Characterization and Applications	2020
22	Mr. Upadhyay Maharshi	I15CY027	Synthesis of Functionalized Silver Nanoparticles: Applications	2020
21	Mr. Sunil Pankaj	I15CY011	Titanium Dioxide Reduction by Neogen1000 in Decorative Paints	2020
20	Ms. Jinet Susan Johny	I15CY022	Fabrication of Carbon Dots: Characterization and Applications	2020
19	Mr. Vishal Dhavle	I14CY043	Functionalization of silver nanoparticles with glutathione-lactose derivative for colorimetric sensing of thiram	2019
18	Ms. Ravalika Sajja	I14CY028	Hexacuclear ruthenium complexes as a potential electrolyte for non-aqueous redox flow batteries	2019
17	Ms. Soujanya Akavaram	I14CY020	Synthesis of bimetallic (Au-Ag) nanoclusters using trypsin as a template: Analytical applications	2019
16	Ms. Snehal Mahyavanshi	I14CY013	Pepsin assisted synthesis of gold-copper nanoclusters for sensing of alufuzosin and Mn ²⁺ ions	2019
15	Ms. Disha Gupta	I13CY032	Green synthetic approach for the synthesis of carbon dots and their applications	2018
14	Mr. Subhadeep Ghosh	I13CY005	Trypsin mediated synthesis of fluorescent gold nanoclusters for nanomolar detection of drugs and metal ions	2018
13	Ms. Gincy George	I12CY027	Ractopamine hydrochloride as a novel reagent for synthesis of gold nanoparticles and their analytical applications	2017
12.	Ms. Raveena Meena	I12CY018	Dapsone mediated synthesis of gold nanoparticles for colorimetric sensing of Al ³⁺ , Fe ²⁺ and Cr ³⁺ ions	2017
11.	Ms. K.	I11CY012	Design and synthesis of novel bi-functional ligands (μ	2016

	Snehalatha		and δ opioid agonist) for the treatment of pain	
10	Mr. Kiran Rana	I11CY017	Unmodified gold nanoparticles as a probe for simultaneous colorimetric detection of six pesticides	2016
9.	Ms. Dhanshri Gyanchand	I10CY041	Green synthetic approach for the synthesis of fluorescent Cu NCs and their applications	2015
8.	Ms. Majithiya Rutuben Pratapbhai	I10CY035	Simple and sensitive detection of glyphosate herbicide in environmental and food samples using 2-mercapto-5-nitrobenzimidazole capped silver nanoparticles as a colorimetric sensor	2015
7.	Ms. Neelima Betha	I09CY006	Dicoumarol as a novel reagent for synthesis of gold nanoparticles for sensing of lysozyme and cysteine: Preparation of fluorescent carbon dots for cell imaging	2014
6.	Ms. Jigna Bhamore	I08CY021	Synthesis of water-dispersible gold nanoparticles by tryptophan, ascorbic acid, hydroxylamine hydrochloride as reducing and capping agents: as cysteine and glutathione-selective colorimetric probes	2013
5.	Mr. Gaurang Patel	I08CY023	Carbendazim pesticide recognition by facile 4-aminothiophenol assembly on silver nanoparticles	2013
4.	Mrs. Richita Modi	I08CY026	Preparation of bifunctionalized silver nanoparticles for the colorimetric sensing of Cr^{3+} and Ba^{2+} ions	2013
3.	Mrs. Sweta Laliwala	I08CY028	Synthesis of citrate-protected silver nanoparticles as colorimetric sensors for the selective and sensitive detection of triptan-family drugs (Antimigrain agents)	2013
2.	Mr. Nishith P. Gandhi	I07CY019	Effect of metal ions (Cu^{2+} , Ni^{2+} , Mn^{2+}) doping in ZnS semiconductor nanoparticles as sensors.	2012
1.	Mr. Utkarsh B. Patel	I07CY017	4-aminothiophenol capped gold nanoparticles as colorimetric sensor for the selective sensing of cobalt ions in water samples	2012

6c. Appendix-V (Completed Projects)

Sl. No.	Title of Project	Funding Agency	Amount	Duration
1.	“Design, synthesis and characterization of functionalized nanoparticles with dithiocarbamate derivatives for selective sensing of pesticides” Role: PI	DST Ref. No: DST/ SR/FT/CS-54/2010	Rs. 20,90,000/-	2011 - 2015
2	Application of Benthic Microbial Fuel Cell (BMFC) for powering Naval Sensors, Role: Co-PI	NRB, DRDO	Rs. 23,19,800/-	2015-2018
3	Organic framework on quantum dots and their uses as fluorescent probes for selective reorganization of metal ions, Role: PI	Dean (R&C)/1503/2013- 2014, dated 17.02.2014	Rs. 10,00,000/-	2014-2016
4	Development of surface functionalized metal-doped nanoparticles as fluorescent probes for sensing trace level of heavy metals in environmental matrix, Role: PI	BRNS, (Ref. No. 37(2)/14/07/2015/B RNS/10401)	Rs. 31,31,400/-	2015 - 2019
5	Designing of Green Synthetic Approaches for Atomically Precise Nanoclusters for Dictating their Specific Interactions: Development of Miniaturized Analytical Methods, Role: PI	DST- EMR/2016/002621	Rs. 35,04.655/-	2017 - 2021

7a. Patent: Apparatus and method of liquid nitrogen assisted spray ionization mass spectrometry (Ref. No: 101129644), Taiwan Patent, inventors, Hui-Fen Wu, Suresh Kumar Kailasa, Nazim Hassan.

7b. Presentations in National and International Conferences

International Conferences

1. “Ultra-fast analysis of hepatic ACS, CPT 1 and ACC mRNA levels in rats using reverse transcriptase; PCR and microchip electrophoresis with laser induced fluorescence detector” **Suresh Kumar Kailasa**, Youn Soo Cha and Seong Ho Kang, The 9th Asian Conference on Analytical Science, November 4-8, 2007, Jeju Island, South Korea.
2. “Comparison of ZnS semiconductor nanoparticles capped with various functional groups as the matrix and affinity probes for rapid analysis of cyclodextrins and proteins in the SALDI-TOF mass spectrometry” **Suresh Kumar Kailasa**, Kamatam Kiran and Hui-Fen Wu, International Chemical Conference, Taipei Analytical Chemistry, October 2 – 5, Kaohsiung, Taiwan.
3. “Synthesis of electrostatically self assembled azide stabilized ZnS nanoparticles as affinity probes for the enrichment, desalting and rapid analysis of peptides and proteins by direct MALDI-TOF-MS” Lokesh Shastri, **Suresh Kumar Kailasa**, Hui-Fen Wu, 18th International Mass Spectrometry Conference, Bremen, Germany, August 30 – September 4th 2009.
4. “Functionalized CdS nanoparticles for improved mass resolution to large protein molecules in MALDI-TOF-MS” **Suresh Kumar Kailasa** and Hui-Fen Wu, The 58th Annual Conference on Mass Spectrometry (ACMS) and The 1st Asian and Oceanic Mass spectrometry Conference (AOMSC), Tsukuba, Japan, June 16th – 18th 2010.
5. “Functionalized QDs with dopamine dithiocarbamate as matrix for the quantification of small molecules and as affinity probes for the rapid identification of microwave tryptic digest proteins by MALDI-MS” **Suresh Kumar Kailasa**, Hui-Fen Wu, Page No 74, 2nd International Congress on Analytical Proteomics, Ourense, Spain, July 18th – 20th 2011.
6. “Functionalized silver selenide nanoparticles as extracting probes for the analysis of peptides by using liquid liquid microextraction coupled with MALDI mass spectrometry” **Suresh Kumar Kailasa**, Hui-Fen Wu, 14th International Conference of International Academy of Physical Sciences on Physical Sciences Interface with Humanity, SVNIT, Surat, December 22nd – 24th 2011.
7. “Applications of Engineered Nanomaterials in Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry for Biomolecules” **Suresh Kumar Kailasa**, Hui-Fen Wu, World Congress on Biotechnology 2011, Hyderabad, India, March 21st – 23rd 2011.
8. “Applications of Surface-engineered Nanoparticles in MALDI Mass spectrometry for Biomolecules Assays” Suresh Kumar Kailasa, Hui-Fen Wu, International Conference on Nanoscience and Nanotechnology, Hyderabad, India, January 20th – 23rd 2012.
9. Advances in Nanoparticles-Assisted MALDI-MS Techniques and their Bioanalytical Applications, Suresh Kumar Kailasa, 12th ISMAS Triennial International Conference on Mass Spectrometry, Goa, March 3rd – 8th 2013.
10. Magnesium Oxide Nanoparticles-Assisted MALDI Mass Spectrometry for the Analysis of Oligosaccharides, Suresh Kumar Kailasa, Hui-Fen Wu, 4th Asia Oceania Mass Spectrometry Conference and 10th Taiwan Society for Mass Spectrometry Annual Conference, Taipei, July 8th – 12th 2013.
11. Nanomaterials Integrated MALDI-MS Approaches for Biomolecules Assays, Suresh Kumar Kailasa, International Conference on Frontiers of Mass Spectrometry, Mahatma Gandhi University, Kottayam, September 6th – 9th 2013.
12. Cyclen dithiocarbamate functionalized silver nanoparticles as a colorimetric sensor for simultaneous colorimetric detection of thiram and paraquat dichloride pesticides in Environmental matrices, Jigneshkumar V. Rohit and Suresh Kumar Kailasa, 1st International Symposium on Nanoparticles/Nanomaterials and Applications, Lisbon, Portugal, January 20th – 22nd 2014.

13. Carbon dots as probes for fluorescent imaging of bacteria (*Escherichia coli*) and yeast (*Saccharomyces cerevisiae*) cells, Suresh Kumar Kailasa, Vaibhavkumar N. Mehta, S. Jha, International Conference on Electron Microscopy and XXXV Annual Meeting of the Electron Microscope Society of India, July 7th – 11th 2014, University of Delhi, India.
14. p-Nitroaniline dithiocarbamate capped gold nanoparticles as a colorimetric sensor for selective detection of quinalphos in environmental samples, Suresh Kumar Kailasa and Jigneshkumar V. Rohit, 5th Interdisciplinary Symposium DAE-BRNS on Materials Chemistry (ISMC-2014), December 9th – 13th 2014, BARC, Mumbai, India.
15. Facile green synthesis of fluorescent carbon dots using vancomycin as a precursor for cell imaging and anti-cancer drug delivery” Suresh Kumar, Stephanie L. D’souza, Balaji Deshmukh, L. Nibetida, IV – International conference on Analytical Proteomics, September 07 – 09th 2015, Lisbon, Portugal.
16. Influencing Factors on Fluorescence Properties of Mn²⁺-doped ZnS Quantum Dots with Glutathione for Cu²⁺ and Hg²⁺ ions sensing, K. Suresh Kumar, Mittal L. Desai, H. Basu, P. K. Sharma, and R. K. Singhal, 1st International Conference on Nanoscience and Nanotechnology, October 19th – 21st 2016, VIT University, Vellore, India.
17. Facile hydrothermal method for synthesis of fluorescent carbon dots derived from carrot juice and their application for mytomycin drug delivery, Suresh Kumar Kailasa, Stephanie D'souza, Shiva Shankaran Chettiar, Karuna A. Rawat, PITTCON-2017, March 5th – 10th 2017, Chicago, USA.
18. "Evaluation of three color fluorescent carbon dots analytical performances for sensing of Fe³⁺ ion and bioimaging applications", Suresh Kumar Kailasa, Siyoung Ha, Seung Hoon Beak, and Tae Jung Park, Biosensors 2018, Miami, USA, Jun 13-15, 2018.
19. Fluorescence “turn-off” detection of deltamethrin and glutathione using amylase protected gold nanoclusters as a probe, Suresh Kumar Kailasa, Jigna R. Bhamore, Sanjay Jha, Rakesh Kumar Singhal, and Z. V. P. Murthy, 5th International Conference on Nanoscience and Nanotechnology, SRM University, Chennai, January 28th – 30th 2019.
20. A facile synthesis of gold-silver bimetallic nanoclusters for fluorescence “turn-off” for quinalphos and “turn-on” for Cd²⁺ and Zn²⁺ ions, Suresh Kumar Kailasa, Sowjanya Akavaram, Mittal L. Desai, Tae-Jung Park, 2nd International Conference on Nanoscience and Nanotechnology, VIT, Vellore, India, 29th November – 1st December 2019.

National conferences

1. “Microchip-Based Capillary Gel Electrophoresis with Programmed Field Strength Gradients for the Ultra-fast Differentiation and Detection of *Mycoplasma haemofelis* and *Candidatus M. haemominutum* in Feral Cats" **Suresh Kumar Kailasa** and Seong Ho Kang (poster), The 99th National Meeting of the Korean Chemical Society, Seoul COEX, South Korea, April 19-20, 2007.
2. “Ultra-fast Simultaneous Detection of Genetically Modified-Maize by Microchip-based Capillary Gel Electrophoresis with Laser-Induced Fluorescence Using Programmed Filed Strength Gradients” **Suresh Kumar Kailasa** and Seong Ho Kang, Korean Chemical Society Conference, Deajon, South Korea, June 28 – 29th 2007.
3. “Nanoparticle-single drop microextraction as multifunctional and sensitive nanoprobe: Binary matrix approach for gold nanoparticles modified with (4-mercaptophenyliminomethyl)-2-methoxyphenol for peptide and protein analysis in MALDI-TOF MS” Lokesh Shastri, **Suresh Kumar Kailasa**, Hui-Fen Wu, Chia-Hsun Lee, The 7th Taiwan Mass Spectrometry Annual Conference, Kaohsiung Medical University, Kaohsiung City, Taiwan, June 27th - 29th 2010.
4. “Interference free detection for small molecules: probing the Mn²⁺-doped effect and cysteine capped effect on the ZnS nanoparticles for coccidiostat and peptide analysis in the SALDI-TOF MS” **Suresh Kumar Kailasa** and Hui-Fen Wu, The 7th Taiwan Mass Spectrometry Annual Conference, Kaohsiung Medical University, Kaohsiung City, Taiwan, June 27th - 29th 2010.
5. “Multifunctional ZrO₂ nanoparticles and ZrO₂-SiO₂ nanorods for improved MALDI-MS analysis of cyclodextrins, peptides, and phosphoproteins” **Suresh Kumar Kailasa**, Hui-Fen Wu and Zhen-

Yu Chen, The 7th Taiwan Mass Spectrometry Annual Conference, Kaohsiung Medical University, Kaohsiung City, Taiwan, June 27th - 29th 2010.

6. Functionalized silver nanoparticles as colorimetric probe for selective sensing of tricyclazole fungicide in rice samples, Suresh Kumar Kailasa, Jignesh Kumar V. Rohit, National Conference on Advances in Chemical Sciences and Engineering, Kanchi, March 6th – 7th 2014.
7. Fluorescence detection of monocrotophos using carbon dots derived from Ziziphus fruit, K. Suresh Kumar, Mandan VishnuVardhan, Mittal L. Desai, Tae-Jung Park, 1st Agrochemicals Congress 2019: Country's Status on Various Fronts of Agrochemicals", Society of Pesticide Science India, Division of Agriculture Chemicals, ICAR-Indian Agriculture Research Institute, New Delhi, November 13-16, 2019.

8. Memberships in Scientific Societies:

Life member of Indian Society of Analytical Scientists (LM No: 1802); Member of Korean Chemical Society (2006 – 2007) Life Member in Indian Society for Mass Spectrometry (LM No: 728); Indian Council of Chemists (LF No: 1412); The Indian Science Congress (LM No: 17039); Indian Chemical Society (LM No: 7397); Chemical Research Society of India (LM No: 1376); National Environmental Science Academy (LM No: 1137); Proteomics Society (LM No: 120); Society of Biological Chemists (INDIA) (LM No: 2573); Indian Society of Chemists and Biologists (LM No: 589); Material Research Society of India (LM No: 1977); Indian Nanoscience Society (LM No: 51); Society for Biomaterials and Artificial Organs (LM No: 558); The Indian Society for Technical Education (LM No: 80876); Indian Association of Nuclear Chemists and Allied Scientists (LM No: 1459); Indian Association of Chemistry Teachers (LM No: 974); Chromatographic Society of India, Association of Environmental Analytical Chemistry of India (LM No: 160).

9.0 Counties visited during last ten years: South Korea, Taiwan, Japan, Spain, Portugal, USA

10.0 Acting as Reviewers for various Reputed International Journals

Analytical Chemistry, Analyst, Chemical Science, New Journal of Chemistry, Chemical Communications, Analytical Methods, RSC Advances, Journal of Materials Chemistry B, Analytical Chemistry, ACS Omega, ACS Applied Materials & Interfaces, ACS Sustainable Chemistry & Engineering, Environmental Science & Technology, Results in Physics, Biosensors & Bioelectronics, Sensors and Actuators B: Chemical, Analytica Chimica Acta, Talanta, Microchemical Journal, Journal of Photochemistry & Photobiology, A, Journal of Industrial and Engineering Chemistry, Journal of the Taiwan Institute of Chemical Engineers, International Journal of Hydrogen Energy, Spectrochimica Acta Part A, Optical Materials, Process Biochemistry, Journal of Molecular Liquids, Journal of Cleaner Production, Food Chemistry, Food Hydrocolloids, Journal of Pharmaceutical and Biomedical Analysis, Nano-Structures & Nano-Objects, ChemistrySelect, Microchimica Acta, Nanoscale Research Letters, Analytical and Bioanalytical Chemistry, Applied Physics A.

11. Research collaborations

International collaborations:

- Department of Chemistry, Chung-Ang University, South Korea
- Kwangwoon University, Seoul-01897, Republic of Korea

National collaborations:

- Analytical Chemistry Division, Bhabha Atomic Research Center, Trombay, India
- Navsari Agriculture University, Navsari, Gujarat, India
- National Centre for Cell Science Complex, Savitribai Phule Pune University Campus, Pune, India.
- Genexplore Diagnostic and Research Centre Pvt. Ltd., Ahmedabad, Gujarat, India