

Dr. INDUJA I J

Assistant Professor of Physics

International Publications – 11

Conferences -15

<u>Citation indices</u>	<u>All</u>	<u>Since 2020</u>
Citations	357	251
h-index	07	07
i10-index	07	07

ADMINISTRATIVE DISTINCTION

- Energy Conservation Club convener
- District Coordinator National Science Day celebrations organized by Kerala State Council for Science, Technology & Environment.
- Associate Editor Iridescent Vision
- Subject Expert in Selecting guest lectures at DB College Sasthamcotta 2020-21 & 2021-22
- PTA Executive member, 2022
- ABC Nodal Officer
- Academy of Physics Teachers (APT) Centre Coordinator 2019-23.
- Add on course coordinator in association with ANERT, Government of Kerala
- Computer Awareness Club member
- WWS Internal mentor
- Member- Book club and library coordination committee, 2019 - 2021
- Research Guide, University of Kerala.

Awards & Honours

- BSc & ; MSc rank holder
- Kerala State Council for Science, Technology & Environment (KSCSTE) research fellowship, 2012.
- Best Poster Award, International Conference on Advanced Functional Materials, 2014.

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QUALIFICATION

M.Sc., M.Phil., Ph.D.

DATE OF JOINING

10.01.2019

AREA OF RESEARCH

- Nanomaterials
- Dielectrics
- Printed electronics
- Antennas
- Flexible substrates

PUBLICATIONS

1. I. J. Induja, P. Abhilash, S. Arun, K. P. Surendran, M. T. Sebastian, LTCC tapes based on Al₂O₃-BBSZ glass with improved thermal conductivity, *Ceram. Int.* 41 (2015) 13572-13581.
2. Induja I. Jayapalan Nair, Manoj R. Varma, Mailadil T. Sebastian, Low-cost room temperature curable alumina ink for printed electronic applications, *J. Mater. Sci: Mater Electron* 27 (2016) 9891-9899.
3. I. J. Induja, K. P. Surendran, M. R. Varma, M. T. Sebastian, Low κ , low loss alumina-glass composite with low CTE for LTCC microelectronic applications, *Ceram. Int.* 43 (2017) 736-740.
4. I. J. Induja, M. T. Sebastian, Microwave dielectric properties of mineral sillimanite obtained by conventional and cold sintering process, *J. Eur. Ceram. Soc.*, 37 (2017) 2143-2147.
5. I. J. Induja, M. T. Sebastian, Microwave dielectric properties of SnO-SnF₂-P₂O₅ glass and its composite with alumina for ULTCC applications, *J. Am. Ceram. Soc.*, 100 (2017), 2632-2640.
6. I. J. Induja, M. R. Varma, M. T. Sebastian, Preparation, characterization and properties of alumina-lithium aluminium borosilicate glass based LTCC tapes, *J. Mater. Sci: Mater Electron* 28 (2017) 14655-14663.
7. I. J. Induja, M. T. Sebastian, Microwave dielectric properties of cold sintered Al₂O₃-NaCl composite, *Mater. Letters* 211 (2018) 55-57.
8. Sibi N, Induja I. J., Surendran K. P., Subodh G, Natural garnet reinforced high density polyethylene composites for sustainable microwave substrates, *Mater. Res. Bull.* 106 (2018) 478-484.
9. I. J. Induja, M. R. Varma, M. T. Sebastian, Mineral Sillimanite-based hard substrates for HTCC applications, *J. Electron. Mater.* 47 (2018) 6171-6176.
10. Ratheesh Kumar Vijayan Pillai and Induja Indira Jayapalan Nair, Development and characterization of visible light driven Ba₂YBiO₆ photocatalyst for the degradation of organic compounds, AIP Conference Proceedings 2379, 030002 (2021).
11. Induja Indira Jayapalan Nair and Ratheesh Kumar Vijayan Pillai Growth of BaAl₂O₄ nanoparticles by auto-ignition combustion method and its characterization, AIP Conference Proceedings 2379, 030006 (2021).

Conference Proceedings

1. D. R. Lekshmi, I. J. Induja, G. Subodh, K. P. Surendran, M. T. Sebastian, Novel functional Dielectrics for microwave applications, ICAFM, 2014 (Best Poster award).
2. I. J. Induja, K. P. Surendran, M. T. Sebastian, Microwave dielectric properties of sillimanite mineral, Kerala Science Congress, Alappuzha, 2015.
3. I. J. Induja, P. Abhilash, K. P. Surendran, M. R. Varma, M. T. Sebastian, Aluminum phosphate-Elastomer composites for flexible substrate applications, ICAMPE, Kottayam, 2015.
4. N. Sibi, I. J. Induja, K. P. Surendran, G. Subodh, Second World Congress on materials Science, Polymer Engineering, Microtechnologies, Oil, Gas and Petrochemistry, UAE, 2016.
5. G. Subodh, N. Sibi, I. J. Induja, K. P. Surendran, IISC, Bangalore, 2016.
6. I. J. Induja, M. R. Varma, M. T. Sebastian, HDPE-Sillimanite Mineral Based Composites for Electronic Applications, International Conference on Polymer Science and Technology (MACRO), Thiruvananthapuram, 2017.
7. I. J. Induja, M. R. Varma, M. T. Sebastian, Low cost dielectric ink based on natural sillimanite for printed electronic applications, Kerala Science Congress, Thiruvalla, 2017.
8. Ratheesh Kumar, I. J. Induja, "A Single step approach for the synthesis of Magnesium Oxide Nanoparticles: Optical and Dielectric Properties" in the International Conference on Recent Advances in

Materials Science (ICRAMS 2020) during 22 nd & 23 rd of January, organized by Research Committee and Post-graduate & Research Departments of Physics and Chemistry, Mahatma Gandhi College, Thiruvananthapuram.

9. V. Ratheesh Kumar, I. J. Induja “Growth of BaAl₂O₄ Nanoparticles by the Method of Solution Combustion and its Characterization, in the National Seminar on Spectroscopic Techniques: Present Scenario (NSST 2020), organized by Post graduate Department of Physics, TKMM College, Nangiarkulangara, Alappuzha, on 31 st January 2020.

10 Presented a paper in “International Conference on Recent Trends in Theoretical and Applied Physics” organized by Post Graduate and Research Department of Physics, Sree Narayana College, Kollam in academic collaboration with The Kerala State Higher Education Council from 14th-16 th December, 2020.

11. Induja I J, Anuma L, Ratheesh Kumar V, Malpighia emarginata leaf extract mediated synthesis of copper oxide nanoparticles, National Seminar on Optics & Photonics,

TKMM College, November 2022.

12. Presented a paper in “International Conference on Recent Trends in Theoretical and Applied Physics” organized by Post Graduate and Research Department of Physics, Sree Narayana College, Kollam in academic collaboration with The Kerala State Higher Education Council from 14th-16 th December, 2020

13. Presented a paper entitled “A novel and ecofriendly approach for the synthesis and characterization of Zinc oxide Nanoparticles from the Extract of Benincasa Hispida” in the International Conference on Advances in Nanomaterials for a sustainable future organized by St. Joseph’s College for Women, Alappuzha on 9/11/25.

14. Presented a paper entitled “Fruit mediated synthesis of Cobalt oxide” in the International Multidisciplinary Symposium on climate crisis and Consciousness organized by KSMD College Sasthamcotta on 30/1/25.

15. Presented a paper entitled “Development of ZnO nanoparticles using Cuminum Cyminum seed extract through an eco-friendly route” in the International Conference on Emerging Materials for Sustainable Development 2025

Webinars participated

- Participated on the webinar on “Brand Communication” organized by IQAC All Saints college, Thiruvananthapuram on 29-05-2020.
- Participated in the National Level Webinar on “Academic E-content Development and Online Course Delivering” organised by the Post Graduate Department of Commerce and Research Centre, Bishop Abraham Memorial College, Thiruvithur, on 30-05-2020.
- Participated on VIRTUOSA 2020 National Webinar Series organized by KSMD College, Sasthamcotta from 14-20 May 2020.
- Participated in the three day International Webinar on “Advances in Functional Materials” (IWAFM) organized by the Department of Physics, Mar Ivanios College (Autonomous), Thiruvananthapuram, India, from 26.06.2020 to 28.06.2020.
- Participated in the webinar on “E-waste management: Challenges & Opportunities” organized by the Department of Physics, Mar Ivanios College (Autonomous), Thiruvananthapuram, India on 25.02.2021.
- Participated in the International Webinar, DOCTRINA-5 organized by Department of Chemistry & IQAC of Sir Syed College on 26-05-2020.
- Participated in the International Webinar, DOCTRINA-5 organized by Department of Chemistry & IQAC of Sir Syed College on 26-05-2020.
- Participated in the International Webinar-DOCTRINA-13 organized by the Department of Chemistry & IQAC, Sir Syed College, Taliparamba, Kannur, Kerala, titled, “The art of synthesizing organic compounds: A Researcher’s Perspective”, on 04-06-2020.
- Participated in The Erudite Scholar in Residence Programme organized by the Department of Physics, Mar Thoma College, Thiruvalla, in association with Kerala State Higher Education Council during 22-27 February 2021.
- Participated in the Moodle Learning Management System training organized at Sree Narayana College, Kannur in January 2020 semester, with course material provided by the Spoken Tutorial

- Project, IIT Bombay. funded by the National Mission on Education through ICT, MHRD, Govt. of India. On April 2020.
- Attended a webinar on “Materials Simulations” organized by IQAC and Department of Physics, Mar Thoma College For Women, Perumbavoor, on 27 May 2020.
- Attended a webinar on “3D Printing of Metallic Materials” organized by IQAC and Department of Physics, Mar Thoma College For Women, Perumbavoor, on 28 May 2020.
- Attended the webinar on Immunity Boosters Against Novel Corona Virus in the series “Navigating through Pandemic”organised by IQAC, PazhassiRaja NSS College, Mattannur on 15-05-2020
- Participated in the International Webinar Lecture Series organised by the Department of Chemistry, St. Michael’s College,Cherthala, Alappuzha, Kerala from 21-23 May 2020.
- Participated in the WEBINAR entitled “MATERIALS TO DEVICE APPLICATION” Organized by the Department of Physics, Sree Ayyappa College for Women, Chunkankadaï on 30/5/2020
- Participated in theNational Webinar on “Need and Progress Towards Fast Photography:A Glimpse through Femtosecond Spectroscopy” organised by the Department of Chemistry,St Xavier’s College for Women,Aluva on 22/5/2020.
- Completed Online Course on COVID 19 –Pandemic Paranoia –Symptoms ,Precautions and Remedies conducted by IQAC, St Xavier’s College for Women, Aluva on 18-05-Papers presented in International/National Conferences

Orientation/Refresher/Short Term Courses Attended

1.Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNM-TT) 1 month Induction Training course – Central University of Kerala, Kasargode 2019 (22-9-2019-23-10-2019).

2.Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNM-TT) 14 days online refresher course in Environmental Studies – Central University of Kerala , Kasargode 2019 (9-3-2021-22-3-2019).

3.One week Faculty Development Programme, organized under UGC- STRIDE, MG University, in association with St. Xavier College for Women, Aluva, from 1st to 7th July 2021.

4. Short term FDP organized by Sree Narayana Mangalam College, Maliankara, Ernakulam, in collaboration with Kerala State Higher Education Council from August 5 to 11 of 2021.

5. Completed NEP Orientation & Sensitization Programme Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by UGC-MMTTC, University of Kerala, Kariavattom, Thiruvananthapuram from 04-11-2024 to 14-11-2024.