

BIO-DATA

1. Full name : **Dr K G Gopchandran**
2. Nationality : Indian
3. Native place : Neendakara, Kollam
4. Date of birth : 31st May 1964
5. Sex : Male
6. Designation : **Professor**
7. Official address : Department of Optoelectronics
&
Member, Syndicate, University of Kerala
&
Professor & Director
School of Technology
&
Formerly Dean, Faculty of Applied Sciences & Technology

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8. Residential address : T C 15/133
Althara Road,
Sasthamangalam P O
Thiruvananthapuram- 695010, India

9. Areas of Interest : Information Technology and Nanotechnology

10. Educational qualifications:

1. B.Sc (Physics, Chemistry and Mathematics): I class
1984, University of Kerala
Thiruvananthapuram- 695034, India
2. MSc (Physics) : I class
1986, University of Kerala, Thiruvananthapuram- 695034
3. PhD, Faculty of Science, 1998, University of Kerala
Thiruvananthapuram- 695034, India
Title of the Ph D thesis "*Preparation and characterization studies of indium oxide and indium tin oxide films*"

11. Research & Development experience : 30 years

Research Guidance (Subject: Optoelectronics):

No. of PhD theses produced: **17; 7 (Ongoing)**

No. of M.Phil Dissertations Guided: 43 (Awarded); 2 (Ongoing)

Mentor: Post-Doctoral students (Present and former) ; 7

(Two DR Kothari Fellows of UGC and one National Doctoral Fellow of DST-SERB, one fellow under University DST-PURSE, One fellow of KSCSTE, one University fellow and one CSIR Post-Doctoral Fellow)).

Ongoing research activities:

- (i) Synthesis and characterization of phosphors for solid state lighting,
- (ii) Development of substrates for surface enhanced Raman scattering
- (iii) Artificial neural networks and
- (iv) Graphene and ZnO based transistors and resistive random access memories.

12. Employment since leaving College:

1. Senior technical Assistant with effect from 15-01-1988 to 29-02-1996 and as Technical officer from 1-03-1996 to 20-02-2004 in Department of Physics, University of Kerala, Thiruvananthapuram.
2. Lecturer in Department of Optoelectronics , University of Kerala, Thiruvananthapuram, India from 21- 02-2004 to 20-02-2008
3. Senior Lecturer in Department of Optoelectronics , University of Kerala, Thiruvananthapuram, India from 21- 02-2008 to 20-02-2013
4. Reader in Department of Optoelectronics , University of Kerala, Thiruvananthapuram, India from 21- 02-2013 to 20-02-2016
5. Associate Professor in Department of Optoelectronics , University of Kerala, Thiruvananthapuram, India from 21- 02-2016 to 16-04-2017
6. Head of the Department of Optoelectronics , University of Kerala, Thiruvananthapuram, India from 17-04-2017 to 16-04-2020
7. Additional charge: June 2013 to May 2017 in charge of Director of Astronomical Observatory, Thiruvananthapuram (Estd. 1837)
8. Formerly Dean, Faculty of Applied Sciences & Technology (2018-19)
9. Presently Professor & Director, School of Technology and Professor of the Department of Optoelectronics (2020-till date).

Other Experiences:

- 1. Expert member in the committee for promotion of Engineers/Scientists of ISRO**
- 2. Expert member in admission board of AcSiR (CSIR-NIIST-Tvm) for selection of Research Scholars in Physical sciences and different assessment committees**
- 3. External expert member in the committee for progress evaluation of Institute Post doctoral Fellows of IISER-Tvm**

4. **Expert/University nominee in the selection committee Assistant Professors (Physics) in various colleges**
5. **External expert member in the Doctoral committee for selection of Research scholars in Physics in M G University, Kottayam**
6. **Acted as representative of National Testing Agency (NTA) in the conduct of NEET examination.**
7. **Expert member in industry-academia linkage collaboration between KSCSTE-CSIR-VINWISH.**
8. **Acted as expert member in the committees constituted for placement/promotion of teachers of affiliated colleges.**
9. **Acted as external examiner for the evaluation of PhD theses of various Universities.**
10. **Convenor, Standing committee of Syndicate on student discipline, University of Kerala.**

13. Number of papers published in SCI/SCIE journals:~ 85 (No. of Citations 3300 (Google Scholar) with h-index 27; Five papers cited more than 100 times)

14. Number of short papers/abstracts/ posters/invited talks/presentations/ in conferences and workshops : ~100

15. Teaching experience at M Tech and M Phil level: ~ 15 years.

16. Reviewed papers (at least one paper) for the following 41 journals:

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|---|---|
| 1. Chemical Society Reviews (RSC) | 19. Journal of the Electrochemical Society |
| 2. Scientific Reports (nature.com) | 20. Journal of Nanoscience and Nanotechnology |
| 3. RSC Advances | 21. Current Applied Physics (Elsevier) |
| 4. Nanotechnology (IOP) | 22. Indian Journal of Pure and Applied Physics |
| 5. Dyes and Pigments (Elsevier) | 23. Indian Journal of Engineering and Material sciences |
| 6. Journal of Physical Chemistry (ACS) | 24. International journal of Nanoparticles (Inderscience) |
| 7. Nanoscale (RSC) | 25. Applied Physics A (Springer) |
| 8. Materials Chemistry and Physics (Elsevier) | 26. Surface and Coatings Technology (Elsevier) |
| 9. Carbohydrate Polymers (Elsevier) | 27. Materials Science and Engineering B (Elsevier) |
| 10. Industrial & Engineering Chemistry Research (ACS) | 28. Bulletin of materials science (Springer) |
| 11. Spectrochimica Acta : Part A (Elsevier) | 29. Energy (Elsevier) |
| 12. Journal of Alloys and compounds (Elsevier) | 30. Molecular structure (Elsevier) |
| 13. Applied surface Science (Elsevier) | 31. Sensors and Actuators: B Chemical (Elsevier) |
| 14. Journal of Colloid and Interface Sci. (Elsevier) | 32. Solid State Sciences (Elsevier) |
| 15. Solar Energy (Elsevier) | 33. Journal of Nanoparticles research (Springer) |
| 16. Physica E (Elsevier) | 34. Materials Research Express (IOP) |
| 17. Journal of Luminescence (Elsevier) | 35. Materials Research Bulletin (Elsevier) |
| 18. Optical and Quantum Electronics (Springer) | 36. Journal of Materials Research and Technology (Elsevier) |
| | 37. Analyst (RSC) |
| | 38. Photonics and Nanostructures-Fundamentals and Applications (Elsevier) |
| | 39. ACS Sustainable Chemistry & Engineering |
| | 40. Materials Science in Semiconductor Processing (Elsevier) |
| | 41. Journal of Molecular Liquids (Elsevier) |
| | 42. Nature Communications |

17. Completed research projects:

1. Preparation and characterization of nanocrystalline nickel oxide films by pulsed laser deposition. Sponsored by Kerala State Council For science, Technology and Environment (KSCSTE), Government of Kerala (2005-07, completed) (Principal investigator)

2. Synthesis and characterization of silicon nanoparticles for optoelectronics applications. Sponsored by Kerala State Council For science, Technology and Environment (KSCSTE), Government of Kerala (2005-07, completed) (Co-Investigator)

3. Synthesis and characterization of gold nanoparticles for plasmonic applications: Major Research Project sponsored by University Grants Commission, New Delhi (2009-2012), (Principal investigator)

18. Membership in academic bodies:

- (i) Member, Academic Council, University of Kerala, India
- (ii) Member, Faculty of Applied science & Technology, University of Kerala, India
- (iii) Chairman, Board of studies in Optoelectronics and Member, BoS in Electronics, University of Kerala, India
- (iv) Formerly member, Board of studies in Physics (PG), University of Kerala, India
- (v) Formerly Member, Governing Council, Kerala State Higher Education Council, Government of Kerala
- (vi) Member, Syndicate and Senate, University of Kerala, India (as IT Expert nominee of Government of Kerala)

19. Membership in international professional bodies:

- (i) American Chemical society (ACS); Membership Number 30313806 (By award in July 2015)
- (ii) Institute of Physics (London); Membership Number 1141576 (By application and election in December 2013)

20. Details of short term courses co-ordinated:

1. Co-ordinated a short term course in Research Methodology in Basic Sciences from 20-03-2017 to 25-03-2017 at the UGC-Human Resource Development Centre, University of Kerala, India.

21. Details of Refresher courses co-ordinated:

1. Co-ordinated 21 days Refresher course in Physics held from 1st November to 22nd November 2011 for College / University teachers organized by organized by UGC-Human Resource Development Centre (Academic Staff College), University of Kerala, India.

2. Co-ordinated 21 days Refresher course in Nanosciences held from 11th November to 1st December 2014 for College / University teachers organized by organized by UGC-Human Resource Development Centre (Academic Staff College), University of Kerala, India.

3. Co-ordinated 21 days Refresher course in Nanosciences held from 25th November to 15th December, 2015 for College / University teachers organized by organized by UGC-Human Resource Development Centre (Academic Staff College), University of Kerala, India.

4. Co-ordinated 21 days Refresher course on Material Sciences held from 29th October to 19th December, 2016 for College / University teachers organized by UGC-Human Resource Development Centre (Academic Staff College), University of Kerala, India.

22. Other duties performed:

1. Was holding additional charge of the Director of Astronomical Observatory (Estd.1837) of the University with effect from June 2013 to May 2017.

2. Working as Faculty-in-charge of the Scanning Probe Microscopy (SPM) facility developed under DST-PURSE programme.

23. Awards/Recognitions:

1. In July, 2015 Dr. K G Gopchandran was awarded a 3 year membership by American Chemical Society (ACS) in recognition of engagement with the Society's mission of service to the global community of chemists.

2. Four Elsevier Journals *Applied Surface Science* and *Journal of Alloys and Compounds*, *Journal of Molecular Liquids* and *Materials Science in Semiconductor Processing* awarded certificate of outstanding contribution in reviewing to Dr. K G Gopchandran, Department of Optoelectronics based on reviews he has made to these journals.

3. In 2017, Dr.K.G.Gopchandran was invited to review a research proposal which was submitted to the annual BSF competition for research grants. The BSF (United States-Israel Binational Science Foundation) is a high level grant-awarding institution, established by the governments of the United States and Israel in the year 1972.

24. Conferences/workshops/Seminars organized:

Acted as Secretary/Convenor to the following conferences

1. National workshop on Recent trends in Optoelectronics and Optical Communication (WOOC-2004) May 26-28, 2004 (Sponsored by KSCSTE, Government of Kerala)
2. Seminar on Recent trends in Communication Technology (RTCT- 2006) on 5th December 2006 (Sponsored by University of Kerala)
3. National Conference on recent trends in Optoelectronics and Laser Technology (NCOL-2007), April 9-11, 2007 (Sponsored by DAE-BRNS, DST, ISRO and KSCSTE)
4. National Seminar on Photonics materials (NSPM -2009), February 26-28, 2009 (sponsored by KSCSTE and C-DIT)
5. National Seminar on Spectroscopic Techniques and its applications in Material Characterisation (NSST- 2013), October 3-4, 2013 (Sponsored by KSCSTE, Government of Kerala)
6. Seminar on Scientific and Engineering Research Methods (SERM-2017), October 30-31, 2017 organized by University of Kerala , Thiruvananthapuram.

25. Selected List of Research Publications(SCOPUS) (2015-2021)

1. Devi Chandra R, Gopchandran KG. "Simple, Low-Temperature Route To Synthesize ZnO Nanoparticles and Their Optical Neuromorphic Characteristics", *ACS Applied Electronic Materials* (2021). Impact factor: 3.314, ISSN: 26376113. <https://doi.org/10.1021/acsaelm.1c00471>
2. Sasidharan S, Jyothi G, Gopchandran KG. "Solution combustion synthesis and luminescence dynamics of CaTiO₃: Eu³⁺, Y³⁺ nanophosphors", *Journal of*

- Luminescence*, 235 (2021): 118048. Impact factor: 3.599, ISSN: 0022-2313.
<https://doi.org/10.1016/j.jlumin.2021.118048>
3. Rekha, C.R., Jiji, S.G., Nayar, V.U. and Gopchandran, K.G. "Simultaneous SERS detection using hexagonal hollow Au-Ag nanoparticles with near infrared plasmon", *Vibrational Spectroscopy* 114 (2021) 103233. Impact factor: 2.507, ISSN: 0924-2031
<https://doi.org/10.1016/j.vibspec.2021.103233>.
 4. Thomas S, George R, Qamhie N, Gopchandran KG, Mahmoud ST, Quatela A, "Sm³⁺-doped strontium barium borate phosphor for white light emission: Spectroscopic properties and Judd–Ofelt analysis", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 248 (2021) 119187. Impact factor: 4.098, ISSN 1386-1425
<https://doi.org/10.1016/j.saa.2020.119187>
 5. Luminescent properties of Li₄Ti₅O₁₂: Eu³⁺ reddish-orange phosphors for WLED applications. Vidyadharan, Viji, S. Sameera, and K. G. Gopchandran. *Materials Today: Proceedings* 26, 117-121 (2020):.
<https://doi.org/10.1016/j.matpr.2019.05.447>.
 6. High quality, highly transparent Cu incorporated WO₃ thin films suitable for blue LED application. Kavitha, V. S., S. R. Chalana, R. Reshmi Krishnan, K. G. Gopchandran, and VP Mahadevan Pillai. *Vacuum* 172, 109044 (2020):.
<https://doi.org/10.1016/j.vacuum.2019.109044> (IF: 2.906)
 7. Characteristics of photonic crystal fibers with different lattices: Realization of constant air percentage by fixing air-filling fraction. Gopchandran, K. G. *Photonics and Nanostructures-Fundamentals and Applications* 39,100785(2020).
<https://doi.org/10.1016/j.photonics.2020.100785> (IF: 2.453)
 8. Hybrid photonic crystal fiber with elliptical micro air hole as an efficient supercontinuum source. Krishna, G. Dhanu, VP Mahadevan Pillai, and K. G. Gopchandran. *Optical Fiber Technology* 56, 102198 (2020):.
<https://doi.org/10.1016/j.yofte.2020.102198> (IF:2.212)
 9. Role of La³⁺ ion substitution sites on the photoluminescence properties of the SrTiO₃: Eu³⁺ phosphors. Jyothi, G., and K. G. Gopchandran. *Journal of Science: Advanced Materials and Devices* 5, 233-241 (2020).
<https://doi.org/10.1016/j.jsamd.2020.04.006> (IF:3.783).
 10. Perovskite titanates at the nanoscale: Tunable luminescence by energy transfer and enhanced emission with Li⁺ co-doping. Sasidharan, Sajesh, G. Jyothi, S. Sameera, and K. G. Gopchandran. *Journal of Solid State Chemistry* 288, 121449 (2020):.
<https://doi.org/10.1016/j.jssc.2020.121449> (IF:2.726).
 11. Influence of local structure on luminescence dynamics of red emitting ZnO: Eu³⁺ nanostructures and its Judd-Ofelt analysis. Raji, R., RG Abhilash Kumar, and K. G. Gopchandran. *Journal of Luminescence* 205, 179-189 (2019).
<https://doi.org/10.1016/j.jlumin.2018.09.002> (IF: 3.280)

12. Influence of surfactants on the electronic properties of liquid-phase exfoliated graphene. Sukumaran, Sheena S., Saurabh Tripathi, A. N. Resmi, K. G. Gopchandran, and K. B. Jinesh. *Materials Science and Engineering: B* 240, 62-68(2019):. <https://doi.org/10.1016/j.mseb.2019.01.003> (IF: 4.706)

13. Shape dependent catalytic activity of unsupported gold nanostructures for the fast reduction of 4-nitroaniline. Jiji, S. G., and K. G. Gopchandran. *Colloid and Interface Science Communications* 29, 9-16 (2019). <https://doi.org/10.1016/j.colcom.2018.12.003> (IF: 2.831)

14. Properties of Au incorporated In₂O₃ films. Krishnan, R. Reshmi, V. S. Kavitha, MC Santhosh Kumar, K. G. Gopchandran, and VP Mahadevan Pillai. *Materials Science in Semiconductor Processing* 93, 134-147 (2019). <https://doi.org/10.1016/j.mssp.2018.12.029> (IF: 3.085)

15. Simultaneous detection of different probe molecules using silver nanowires as SERS substrates. Rekha, C. R., S. Sameera, V. U. Nayar, and K. G. Gopchandran. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 213, 150-158(2019):. <https://doi.org/10.1016/j.saa.2019.01.030> (IF:3.232)

16. Plasmonic photocatalytic activity of ZnO: Au nanostructures: Tailoring the plasmon absorption and interfacial charge transfer mechanism. Raji, R., and K. G. Gopchandran. *Journal of hazardous materials* 368, 345-357 (2019). <https://doi.org/10.1016/j.jhazmat.2019.01.052> (IF: 9.038)

17. Design of low dispersion and low loss photonic crystal fiber: Defected core circular-octagon hybrid lattices. Krishna, G. Dhanu, VP Mahadevan Pillai, and K. G. Gopchandran. *Optical Fiber Technology* 51, 17-24 (2019). <https://doi.org/10.1016/j.yofte.2019.04.015> (IF: 2.212)

18. Optical and Raman studies of nanocrystalline tin oxide thin films prepared by spray pyrolysis. Reshmy, V. K., K. G. Gopchandran, and V. K. Vaidyan. *Journal of Optoelectronics and Advanced Materials* 21, 609-617 (2019). (IF:0.59)

19. Nanostructured zinc aluminates: A promising material for cool roof coating. Sameera, S., Viji Vidyadharan, Sajesh Sasidharan, and K. G. Gopchandran. *Journal of Science: Advanced Materials and Devices* 4, 524-530 (2019). <https://doi.org/10.1016/j.jsamd.2019.10.003> (IF:3.783)

20. ZnO: Ag nanorods as efficient photocatalysts: Sunlight driven photocatalytic degradation of sulforhodamine B. Raji, R., K. S. Sibi, and K. G. Gopchandran. *Applied Surface Science* 427, 863-875 (2018). <https://doi.org/10.1016/j.apsusc.2017.09.050> (IF: 6.182)

21. Fast photocatalytic degradation of sulforhodamine B using ZnO: Cu nanorods. Raji, R., and K. G. Gopchandran. *Journal of Physics and Chemistry of Solids* 113, 39-49 (2018). <https://doi.org/10.1016/j.jpcs.2017.10.008> (IF: 3.442)

22. Jyothi, G., and K. G. Gopchandran. "Compositional tuning and site selective excitations in SrTiO₃: Y³⁺, Eu³⁺ red phosphors." *Dyes and Pigments* 149 (2018): 531-542. <https://doi.org/10.1016/j.dyepig.2017.10.040> (IF: 4.613)
23. Synthesis of highly stable silver nanorods and their application as SERS substrates. Rekha, C. R., V. U. Nayar, and K. G. Gopchandran. *Journal of Science: Advanced Materials and Devices* 3, 196-205 (2018). <https://doi.org/10.1016/j.jsamd.2018.03.003> (IF: 3.783)
24. Surfactant molecules make liquid phase exfoliated graphene a switching element for resistive random access memory applications. Sukumaran, Sheena S., K. B. Jinesh, and K. G. Gopchandran. *Journal of Materials Science: Materials in Electronics* 29, 9700-9708 (2018). <https://link.springer.com/article/10.1007/s10854-018-9007-2> (IF: 2.220)
25. Raman and scanning tunneling spectroscopic investigations on graphene-silver nanocomposites. Sukumaran, Sheena S., C. R. Rekha, A. N. Resmi, K. B. Jinesh, and K. G. Gopchandran. *Journal of Science: Advanced Materials and Devices* 3, 353-358 (2018). <https://doi.org/10.1016/j.jsamd.2018.06.003> (IF: 3.783)
26. Prediction of plasmons in silver nanorods using artificial neural networks with back propagation algorithm. Rekha, C. R., V. U. Nayar, and K. G. Gopchandran. *Optik* 172, 721-729 (2018):. <https://doi.org/10.1016/j.ijleo.2018.07.090> (IF: 2.187)
27. Site selective substitution and its influence on photoluminescence properties of Sr 0.8 Li 0.2 Ti 0.8 Nb 0.2 O 3: Eu 3+ phosphors. Jyothi, G., L. Sandhya Kumari, and K. G. Gopchandran. *RSC Advances* 7, 28438-28451 (2017). <https://doi.org/10.1039/C7RA03598E>. (IF:3.070)
28. Au–Ag hollow nanostructures with tunable SERS properties. Jiji, S. G., and K. G. Gopchandran. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 171, 499-506 (2017). <https://doi.org/10.1016/j.saa.2016.08.022>. (IF: 3.232)
29. ZnO: Cu nanorods with visible luminescence: copper induced defect levels and its luminescence dynamics. Raji, R., and K. G. Gopchandran. *Materials Research Express* 4, 025002 (2017). <https://doi.org/10.1088/2053-1591/aa5762>. (IF: 1.914)
30. ZnO nanostructures with tunable visible luminescence: Effects of kinetics of chemical reduction and annealing. Raji, R., and K. G. Gopchandran. *Journal of Science: Advanced Materials and Devices* 2, 51-58 (2017). <https://doi.org/10.1016/j.jsamd.2017.02.002>. (IF: 3.783)
31. Liquid phase exfoliated graphene for electronic applications. Sukumaran, Sheena S., K. B. Jinesh, and K. G. Gopchandran. *Materials Research Express* 4, 095017(2017). <https://doi.org/10.1088/2053-1591/aa8586>. (IF: 1.914)

32. White emitting Dy³⁺ activated perovskite titanates and energy transfer by Eu³⁺ codoping. Jyothi, G., L. Sandhya Kumari, and K. G. Gopchandran. *Ceramics International* 43, 12044-12056 (2017).
<https://doi.org/10.1016/j.ceramint.2017.06.058>. (IF: 3.82)
33. Synthesis of pure and biocompatible gold nanoparticles using laser ablation method for SERS and photothermal applications. Vinod, M., Ramapurath S. Jayasree, and K. G. Gopchandran. *Current Applied Physics* 17, 1430-1438 (2017).
<https://doi.org/10.1016/j.cap.2017.08.004>. (IF: 2.281)
34. Studies on plasmon characteristics and the local density of states of Au and Ag based nanoparticles. Vinod, M., V. Biju, and K. G. Gopchandran. *Superlattices and Microstructures* 89, 369-377 (2016). <https://doi.org/10.1016/j.spmi.2015.11.035>. (IF:2.12)
35. Organic mediated synthesis of highly luminescent Li⁺ ion compensated Gd₂O₃: Eu³⁺ nanophosphors and their Judd–Ofelt analysis. Kumar, RG Abhilash, Satoshi Hata, Ken-ichi Ikeda, and K. G. Gopchandran. *RSC Advances* 6, 67295-67307 (2016):.
<https://doi.org/10.1039/C5RA26095G>. (IF:3.070)
36. Jiji, S. G., and K. G. Gopchandran. "Restructuring hollow Au–Ag nanostructures for improved SERS activity." *Materials Research Express* 3, 105012 (2016).
<https://iopscience.iop.org/2053-1591/3/10/105012>. (IF:1.914)
37. Uniformity analysis in nanocrystalline silver thin films using fuzzy inference system. John, Jisha, Madhu S. Nair, K. G. Gopchandran, and M. Wilscy. *Surface and Interface Analysis* 47, 161-165 (2015). <https://doi.org/10.1002/sia.5628>. (IF:1.665)
38. Enhanced red emission in LiY_{1-x}Mo₂O₈: xEu³⁺ phosphors for white light emitting diodes. Kumari, L. Sandhya, and K. G. Gopchandran. *Materials Today: Proceedings* 2, 1007-1011 (2015). <https://doi.org/10.1016/j.matpr.2015.06.026>.
39. Synthesis of gold nanoflowers and their high SERS performance. Jiji, S. G., and K. G. Gopchandran. *Materials Today: Proceedings* 2, 928-933(2015).
<https://doi.org/10.1016/j.matpr.2015.06.011>.
40. Citrate mediated synthesis and tuning of luminescence in Eu³⁺ incorporated Gd₂O₃ nanophosphors. Kumar, RG Abhilash, and K. G. Gopchandran. *IOP Conference Series: Materials Science and Engineering* 73, 012122 (2015). doi:10.1088/1757-899X/73/1/012122.(IF:4.652)
41. Luminescence dynamics and concentration quenching in Gd₂– xEu_xO₃ nanophosphor. Kumar, RG Abhilash, Satoshi Hata, Ken-ichi Ikeda, and K. G. Gopchandran. *Ceramics international* 41, 6037-6050 (2015).
<https://doi.org/10.1016/j.ceramint.2015.01.051>. (IF:3.830)

42. Virus shaped gold nanoparticles with tunable near infrared plasmon as SERS substrates. Jiji, S. G., and K. G. Gopchandran. *Materials Research Express* 2, 075005 (2015). <http://dx.doi.org/10.1088/2053-1591/2/7/075005>. (IF:1.914)
43. Bimetallic Au–Ag nanochains as SERS substrates. Vinod, M., and K. G. Gopchandran. *Current Applied Physics* 15, 857-863 (2015). <https://doi.org/10.1016/j.cap.2015.03.018>. (IF: 2.138)
44. Ag@ Au core–shell nanoparticles synthesized by pulsed laser ablation in water: effect of plasmon coupling and their SERS performance. Vinod, M., and K. G. Gopchandran. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 149, 913-919 (2015). <https://doi.org/10.1016/j.saa.2015.05.004>. (IF:3.232)

Research Publications (SCOPUS):

(h-index; 27 and citations; ~3200)

- (1) Devi Chandra R, Gopchandran KG. "Simple, Low-Temperature Route To Synthesize ZnO Nanoparticles and Their Optical Neuromorphic Characteristics", *ACS Applied Electronic Materials* (2021) (in print).
- (2) Sasidharan S, Jyothi G, Gopchandran KG. Solution combustion synthesis and luminescence dynamics of CaTiO₃: Eu³⁺, Y³⁺ nanophosphors. *J Lumin* 2021;235.
- (3) Rekha CR, Jiji SG, Nayar VU, Gopchandran KG. Simultaneous SERS detection using hexagonal hollow Au-Ag nanoparticles with near infrared plasmon. *Vib Spectrosc* 2021;114.
- (4) Thomas S, George R, Qamhie N, Gopchandran KG, Mahmoud ST, Quatela A. Sm³⁺-doped strontium barium borate phosphor for white light emission: Spectroscopic properties and Judd–Ofelt analysis. *Spectrochim Acta Part A Mol Biomol Spectrosc* 2021;248.
- (5) Sasidharan S, Jyothi G, Sameera S, Gopchandran KG. Perovskite titanates at the nanoscale: Tunable luminescence by energy transfer and enhanced emission with Li⁺ co-doping. *J Solid State Chem* 2020;288.
- (6) Jyothi G, Gopchandran KG. Role of La³⁺ ion substitution sites on the photoluminescence properties of the SrTiO₃:Eu³⁺ phosphors. *J Sci Adv Mater Devices* 2020;5(2):233-241.
- (7) G. DK, V.P. MP, Gopchandran KG. Characteristics of photonic crystal fibers with different lattices: Realization of constant air percentage by fixing air-filling fraction. *Photonics Nanostruc Fundam Appl* 2020;39.
- (8) Dhanu Krishna G, Mahadevan Pillai VP, Gopchandran KG. Hybrid photonic crystal fiber with elliptical micro air hole as an efficient supercontinuum source. *Opt Fiber Technol* 2020;56.
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26. Details of PhD thesis guided by Dr K G Gopchandran

Sl. No.	Name of the candidate	Awarde d/Submi tted	Year	Title of the PhD thesis
1.	Dr. Sasi B.	Awarded	2008	Preparation and characterization studies of nanostructured nickel oxide and lithium doped nickel oxide thin films
2.	Dr. Unni C.	Awarded	2010	Studies on synthesis and characterization of CdS and ZnS quantum dots
3.	Dr. Nissamudeen K.M.	Awarded	2010	Preparation and characterization studies of Y ₂ O ₃ :Eu based nanocrystalline thin Film Phosphors
4.	Dr. Geo Rajan	Awarded	2010	Studies on the effect of structure and morphology on the luminescence properties of laser ablated Gd ₂ O ₃ :Eu ³⁺ based nanocrystalline thin films
5.	Dr. Renju R Krishnan	Awarded	2011	Microstructural and spectroscopic investigations of pulsed laser ablated nanostructured tantalum oxide films and fabrication of tantalum oxide based capacitors
6.	Dr. Smitha S.L.	Awarded	2012	Studies on synthesis and characterization of gold nanoparticles for plasmonic applications
7.	Dr. Gopakumar K.	Awarded	2012	Studies on chaotic behavior of electronic circuits and its Applications
8.	Dr. Sankar S.	Awarded	2012	Preparation and characterization studies of nanocrystalline TiO ₂ , TiO ₂ /Ag and TiO ₂ /Au thin films
9.	Dr. Vinod M.	Awarded	2016	Laser assisted synthesis of gold and silver based colloidal nanostructures and their characterization
10.	Dr.. Abilashkumar R. G.	Awarded	2016	Studies on synthesis and characterization of Gd ₂ O ₃ :Eu ³⁺ based Nanophosphors
11.	Dr. Reshmi V.K.	Awarded	2017	A theoretical and experimental study on nanocrystalline tin oxide thin films
12.	Dr. Jiji S. G.	Awarded	2017	Studies on synthesis, characterization and applications of Au and Ag based nanostructures.
13.	Dr. Raji R.	Awarded	2017	Studies on ZnO at the nanoscale: As a phosphor and photocatalyst
14.	Jyothi G	Awarded	2019	Investigations on photoluminescence from certain perovskite oxides activated by rare earth ions
15.	Dr. Sheena S.Sukumaran	Awarded	2018	Studies on synthesis and characterization of liquid phase exfoliated graphene and its applications
16.	Dr Rekha C R	Awarded	2018	Studies on Synthesis, Modelling and Characterization of Silver Nanoparticles and their Application as SERS substrates

17.	Dr Dhanu Krishna	Awarded	2020	Studies on photonic crystal fibers and its applications
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