

Name of the Teacher: Dr. Neethu Sundaresan

Designation : H.O.D & Assistant Professor

Contact Number : 9656724541

Residential Address : SREEPAADAM, BRN 166A, POLAYATHODE, Vadakkevila P.O,
Kollam 691010

Email : neetujyothis@gmail.com

Official Email neetujyothis@msmcollege.in

Academic Qualification

Ph. D in Chemistry

Area of Interest/Specialization

Bionanocomposites, Green Synthesis of nanoparticles, Liquid Crystalline DNA

Teaching Experience (as on 31.03.2021) : 10 Years

Details of Major or Minor Projects

NIL

Administrative / Official Responsibilities

IQAC Coordinator

Academic Positions

Research Guide, PG Exam Pass Board

Awards and Accolades

Indian National Science Academy (INSA) Visting Scientist Fellowship Award 2015-2016.

JRF Award of Council of Scientific & Industrial Research (CSIR-UGC) Fellowship, June 2000.

Seminar / Conference organized

1. Best Practices in Science Research, 2017, KSCSTE & SERB
2. Seminar on NAAC Revised Accreditation Framework, 2019, Institution
3. Skill Development Workshop on MOODLE for Faculty, 2019, Institution
4. Sources of Funding for Research Activities, 2019, Institution
5. Nanocomposites for Advanced Functional Materials, 2020, Institution
6. Faculty Development Programme on E-Content Development, 2020, Institution
7. Faculty Development Programme on How to prepare SSR & AQAR for NAAC, 2021, Institution

Training Courses attended

- Attended Orientation course for Faculty members in Academic Staff college, Kariavattom campus from Jan 1-28, 2013.
- Attended a Refresher Course in Chemistry in Academic Staff College, Kariavattom Campus from 30 July-19 Aug, 2014.
- Attended Online ARPIT Refresher Course in Chemistry, 2019
- Attended Faculty Development Programme at T.K.M. College of Arts & Science, Kollam, on 3rd, 4th and 5th January, 2019.
- Attended one week Faculty Development Programme For Educational Administrators organized by KSHEC at Thiruvananthapuram from 10 to 14 July, 2019.
- Attended one week National Workshop on Learning Management Systems through online mode organized by SNDT Women's University, Mumbai from 29th July to 4th August 2019.
- Attended two week MOOC Course on Online Learning and Content Development organized by Flair, Directorate of Collegiate Education, Kerala from 18 April to 2nd May, 2020.
- Attended one week National Workshop on ICT Tools for Online Learning through online mode organized by SNDT Women's University, Mumbai from April 20-28, 2020.
- Attended one week Faculty Development Programme on Online Education in Higher Education Institutions, organized by KSHEC, Thiruvananthapuram from 13 to 17 July, 2020.
- Attended one week Faculty Development Programme on E-Content Development,

organized by GAD-TLC and SD College, Ambala Cantt, Haryana from 13th to 17th July, 2020.

- Attended one week Faculty Development Programme on Multimedia Enriched powerful presentations, organized by GAD-TLC from 11th to 16th August, 2020.
- Attended one week Faculty Development Programme on Online Short Term Course for Professional Development of IQAC Co-ordinators, organized by HRDC, Osmania University from 12th to 18th August, 2020.
- Attended one week Faculty Development Programme on Online Tools in Teaching Chemistry through online mode, organized by St. Teresa's College, Ernakulam from 2nd to 6th September, 2020.
- Attended the one week online Faculty Development Programme on 'The dynamics of Research ; Prospects, Reflections and Best Practices', organized by UGC – STRIDE (Sanction No. F2- 10/2019(STRIDE-1) dated 3-Dec-2019), Mahatma Gandhi University, Kottayam in association with Internal Quality Assurance Cell, St. Xavier's College for Woman, Aluva, from 1 st to 7th July 2021.

Seminar / Conference attended

- Attended and presented one research paper in an International conference and National Seminar, MACRO 2004 held in Mascot Hotel, in December 2004.
- Participated in Foundation course in Biomaterials for Drug Delivery Systems conducted by Industry Institute Partnership Cell, Biomedical Technology Wing, Sree Chitra Thirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India , July 17-18, 2003.
- Attended and presented one research paper in an International seminar and National conference, MACRO 2002 held in Indian Institute of Technology, Kharagpur in December 2002.
- Attended a State Level Seminar ORMEC -13 in M.S.M.College, Kayamkulam on October 9-10, 2013.
- Attended and presented one research paper in a national seminar SUPRANO-2013 in M.S.M.College, Kayamkulam on Dec. 2013 .

Attended and presented one research paper in “Trends in combinatorial chemistry and cheminformatics” on 21-22, March 2014.

- Attended one day conference PCYR-15 on Dec.18, 2015 at NIIST, TVM.
- Attended an International Conference "Tropical Plants and Molecular Design" at T.K.M. College of Arts & Science, Kollam on February 14th – 15th , 2017.

Attended a two day national seminar “New horizons in Cancer Treatment and Prevention: From Bench to Bedside” on 16th & 17th March 2018 at S.N.College, Kollam.

- Attended One day seminar on Facilities of the NABL accredited Laboratory and Familiarization visit to the CEPCI Laboratory and Research Institute, organized by CEPCI, at Cashew Bhavan, Kollam on 17th August, 2018.
- Attended a National Seminar on Advances in Integrated Scientific Research at M.S.M.College, Kayamkulam on 15th and 16th January 2019.
- Attended webinar on How to be Secure Online organized by Shri M.D.Shah Mahila College of Arts and Commerce, Malad on 20th May 2020.
- Attended webinar on Preparing for Online Teaching organized by SH College, Thevara, Ernakulam on 21st May 2020.
- Participated in the State Level Webinar titled SAAC: CONTEXT AND CONTENT organized by Sree Narayana College, Nattika, in association with M P Moothedath Memorial Sree Narayana Trusts College, Shoranur, Sree Narayana Guru College of Advanced Studies, Nattika, and Sree Narayana Guru College of Advanced Studies, Alathur, on 25th July 2020.
- Attended webinar on Career Advancement Scheme & UGC Regulations organized by Marthoma College, Malappuram on 3rd August 2020.
- Attended seminar on “Effective Utilization of Google Classroom, Google Meet and chrome extension” organized by Department of Skill Development & Innovative Practices, Bannari Amman Institute of Technology, Sathyamangalam, Erode, Tamilnadu on 10.09.2020.
- Attended seminar on “Utilizing Digital platform website, mobile app and youtube channel” organized by Department of Skill Development & Innovative Practices, Bannari Amman Institute of Technology, Sathyamangalam, Erode, Tamilnadu on 17.09.2020.
- Participated in the One-day IQAC Online Symposium organized by Loyola College of Social Sciences (LCSS), Thiruvananthapuram In Collaboration with Kerala State Higher Education Council (KSHEC), Rajagiri College of Social Sciences Kalamassery, Nirmala

College, Muvattupuzha, St. Teresa's College, Cochin and St. Thomas College, Palai on 24th June 2021.

•

Social Media Links

International Journal Publications

Lithium ion induced stabilization of Liquid Crystalline DNA.

Sundaresan, N.; Thomas, T.; Thomas, T. J.; Pillai, C. K. S. *Macromolecular Bioscience* 2006, 6, 27-32, (IMP. FACTOR: 2.51)

2. Role of Mg^{2+} and Ca^{2+} in DNA Bending: Evidence from ONIOM-based QM-MM Study of a DNA Fragment.

Neethu Sundaresan, C. K. S. Pillai, Cherumuttathu H. Suresh.

Journal of Physical Chemistry A, 110 (28) 8826 – 8831, 2006 (IMP. FACTOR: 3.047).

3. A base-sugar-phosphate three layer ONIOM model for cation binding: Relative binding affinities of alkali metal ions for phosphate anion in DNA.

Neethu Sundaresan, Cherumuttathu H. Suresh.

Journal of Chemical Theory and Computation, 3, (3), 1172-1182, 2007 (IMP. FACTOR: 4.308)

4. Liquid Crystalline phase behavior of high molecular weight DNA: Study of the influence of metal ions of varying size, charge and binding mode.

Neethu Sundaresan, Suresh, C.H, C.K.S. Pillai, T. Thomas, T. J. Thomas.

(*Biomacromolecules*, 9 (7) 1860-1869, July 2008 (IMP. FACTOR: 4.409).

5. Studies on the Condensation of Depolymerised Chitosans with DNA for preparing DNA – Chitosan nanoparticles for gene delivery applications.

Morris V. B., Neethu S., Abraham, T. E, Sharma, C.P, Pillai C.K.S.

(*Journal of Biomedical Materials Research PartB: Applied Biomaterials*, Volume 89B Issue 2, (2009) Pages 282 – 292. (IMP. FACTOR: 1.993)

6. Investigations on the spermine induced liquid crystalline phase behavior of high molecular

weight DNA in the presence of alkali and alkaline earth metal ions.

Neethu Sundaresan, Thresia Thomas, T. J. Thomas and C. K. S. Pillai, Polymer Chemistry, 2, 2835 -2841, 2011(IMP. FACTOR: 5.3).

7. Review on 'Liquid Crystalline DNA' communicated to Progress in Polymer Science, Neethu Sundaresan and C.K.S.Pillai

National Journal Publications

Investigations on the Liquid Crystalline Phases of cation induced condensed DNA.C.K.S. Pillai, Neethu Sundaresan, M. Radhakrishna Pillai, T. Thomas, T. J. Thomas. Pramana, Journal of Physics, 65, 4, 2005, 723-729.

Book Chapter Publications

NIL

International Conference Publications

International conference on Energy and Environment (ICEE2K19) held during 12-14 December 2019

T. K. M. College of Arts and Science, Kollam

Poster presented on:

Synthesis of silver nanoparticles using naturally occurring

Hydroxycinnamic acid: characterization and evaluation of antimicrobial and anti-oxidant properties abstract on

Page number-67

National Conference Publications

NIL

Workshops Attended

- Attended one workshop on Microscale experiments in Chemistry in S.N.College for Men,Kollam on 14-15 March 2014.
- Attended one workshop on Practicals in B.Sc chemistry in Fathima Mata College,

Kollam on 17th January 2015.

- Attended a National Level Workshop On Computational Chemistry-From Theory To Applications (In Silico-15) in M.S.M.College, Kayamkulam from 29th -31st July 2015.
- Organized and attended a two day workshop On Best Practices in Science Research-2017 in M.S.M.College, Kayamkulam on February 20 and 21, 2017.
- Attended Annual Workshop for Principals and IQAC Co-ordinators on Changing Parameters Of Quality Assessment In Higher Education at T.K.M. College of Arts & Science, Kollam, on 25th November, 2017.
- Attended a three day national workshop on ‘ Introduction to GAMESS – A Practical Approach’ on 21st , 22nd and 23rd of February 2018 at University College, Thiruvananthapuram.
- Attended workshop On M.Sc Chemistry Syllabus revision organized by Academy of Chemistry Teachers at S.N.College, Kollam on 6th June 2019.
- Attended one week National Workshop on Learning Management Systems through online mode organized by SNDT Women’s University, Mumbai from 29th July to 4th August 2019.
- Attended one week National Workshop on ICT Tools for Online Learning through online mode organized by SNDT Women’s University, Mumbai from April 20-28, 2020.
- Attended one week Online International Workshop on Intricacies of NAAC Assessment for better Scoring, organized by St. Francis De Sales College, Nagpur from 27 to 31st July, 2020.
- Attended an International e-Workshop on Electronic Structure Theory and Applications to Chemical Systems from 2nd -6th November 2020.
- Attended an Online Workshop for College Chemistry Teachers and Students from December 17-20, 2020 organized by JNCASR, Bangalore & Foundation for Capacity Building in Science, Trivandrum.

Other Publications

NIL

Other Relevant information

Nodal Officer at College Level: NIRF, UGC

Additional Resources