**Dr. I. VETHA POTHEHER M.Sc., Ph.D.,**
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Anna University, BIT Campus
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## Personal Data:

| | | |
|---|---|---|
| Date of Birth | : | 11 – 04 – 1980 |
| Sex | : | Male |
| Father's Name | : | A. Innasimuthu |
| Nationality | : | Indian |
| Marital status | : | Married |

## Academic Qualification:

| Examination Passed | Name of Institution | Name of University | Year of Passing | % of Marks |
|---|---|---|---|---|
| Ph.D., (Physics) | LoyolaCollege, Chennai. | University of Madras | February 2009 | By thesis |
| M.Sc., (Physics) | V.H.N.S.N. College,Virudhunagar | Madurai Kamaraj | June 2004 | 73.50 |
| B.Sc., (Physics) | St. Joseph's College, Trichy. | Bharathidasan | April 2002 | 64.09 |

## Ph. D., Thesis:

"A Study on the growth and physicochemical properties of metallo organic NLO complex crystals of ATMB, CMTWMP, CMTG and MMTG"

## Book Published:

Title of the Book: **GROWTH AND PHYSICOCHEMICAL PROPERTIES OF METALLO ORGANIC NLO CRYSTALS**

ISBN Number: **978-3-8383-8753-6**

Publisher: **Lambert Academic Publishing AG & Co, Germany.**

**Editorial Board Member**

- Serving as Associate Editorial Board Member for the Journal "Current Chinese Science" - Bentham Science, UAE.

**Awards:**

1. Received **"The Best Paper Presentation Award"** in Second national symposium on nonlinear optical crystals and modeling in crystal growth organized by the Department of Physics, Anna University during March 26 – 27, 2007.
2. Received a special award for the **"Outstanding Performance as Coordinator for Students' Welfare"** in Loyola College during the academic year 2006 – 07.
3. Received **"Star of Loyola Award"**for outstanding achievement in the academic year 2004 – 05.

**Membership:**

- Life member in **Indian Association for Crystal Growth**.
- Life member in **Materials Research Society of India.**
- Life member in **Indian Laser Association.**

**Teaching Experience:**

1. Worked as a Lecturer in the Department of Physics, Noorul Islam University, Thuckalay from July 2009 to September 2009
2. Working as an Assistant Professor in Physics, Anna University BIT Campus, Tiruchirappalli from September 2009 to till date.

**Administrative Experience:**

- Serving as Library coordinator at University College of Engineering, Anna University BIT Campus, Trichy.
- Served as **Exam Cell Coordinator** at University College of Engineering, Anna University BIT Campus, Trichy.
- Serving as **Additional First Year Coordinator** at University College of Engineering, Anna University BIT Campus, Trichy.
- Served as **Coordinator (Placement), Indian Institute of Information Technology (IIIT)** Srirangam.
- Served as **Deputy WardenIndian Institute of Information Technology (IIIT)** Srirangam.

**Research Experience:**

- Fifteen years of research experience in the field of Crystal growth and Characterization.
- Eight years of research experience in synthesis of nano materials for supercapacitor and biological applications.

**Areas of Research:**

- Synthesis of nano materials using leaf extraction and protein from leaf for antibacterial, antimicrobial and anticancer activities.
- Synthesis of nano materials for supercapacitor and photo catalytic
- Synthesis and growth of materials suitable for photonics device fabrication
- Development of novel materials suitable for terahertz wave generation
- Characterization/Testing of materials by laser and estimation of parameters like SHG efficiency and damage threshold.
- Characterization/Testing by Heat flow, mechanical and spectroscopic techniques.

**Research Funds received:**

| S. No. | Name of the Agency | Title of the Project |
|---|---|---|
| 1. | Center for Technology Development and Transfer | Development of highly efficient mannich base organic NLO crystals for electro-optic applications. |
| 2. | CSIR | Regional level Exposition on National Science Day 2014 |

**Seminar / Workshops / conferences organized:**

- ✓ Served as Organizing Secretary for the TEQIP – II sponsored two days National Seminar on Materials Science and Engineering (NSMSE), 03-12-2013 to 04-12-2013.
- ✓ Served as Organizing Committee member for the TEQIP – II sponsored Faculty Development Program (FDP) on Advances in Physics and Applied Research for Technologists – 2013 (APART 2013), 29-11-2013 to 06-12-2013.
- ✓ Served as Co-coordinator for the TEQIP – II sponsored two days National Workshop on Optoelectronics and Advanced Materials (OPAM – 2013), 12-12-2013 to 13-12-2013.

- ✓ Served as Convener for the CSIR sponsored National Science Day Celebrations – 2014, Regional Level Exposition, 28-02-2014.
- ✓ Served as Steering Committee member for the TEQIP – II sponsored National Conference on Physics of Bulk and Nano Materials & Devices (P-BAND-2015), 19-03-2015 to 20-03-2015.
- ✓ Served as Coordinator for the TEQIP – II sponsored Two Weeks FDP on Advanced Research in Materials for Engineering and Technological Applications (ARMETA-2015), 17-07-2015 to 30-07-2015.
- ✓ Served as Treasurer for the TEQIP – II sponsored International Conference on Recent Advances in Materials (ICRAM-15), 16-10-2015 to 17-10-2015.
- ✓ Served as Coordinator for the TEQIP – II sponsored Two Weeks FDP on Recent Advancements in Materials (FDP RAM-'16), 11-07-2016 to 24-07-2016.

**Orientation and Training Program attended:**

- Attended Faculty Development and Training Program (FDTP) on Engineering Physics I (PH2111), conducted by Centre for Faculty Development, Anna University Chennai, from 20 to 27, June 2012.
- Attended UGC sponsored Orientation program conducted by UGC-Academic Staff College, Pondicherry University, Pondicherry from 19-12-2012 to 15-01-2013.
- Attended TEQIP – II sponsored Faculty Development Programme on Advances in Physics and Applied Research for Technologists – 2013 (APART 2013), conducted by the Department of Physics, Anna University BIT Campus, Tiruchirappalli, from 29-11-2013 to 06-12-2013.
- Attended TEQIP – II sponsored Faculty Development Programme on New Perspectives in Drug Discovery And Progressive Technological Developments(NPDPTD- 2015), conducted by the Department of Pharmaceutical Technology, Anna University BIT Campus, Tiruchirappalli, from 04-05-2015 to 17-05-2015.
- Attended Management Development Programme on "Academic Leadership Programme" for TEQIP Institutions, Conducted by Indian Institute of Management Kozhikode, from 24-08-2015 to 29-08-2015.
- Attended Indian Academy of Science sponsored Refresher Course on Experimental Physics – 100, conducted by Panjab University, Chandigarh, from 17-07-2018 to 01-08-2018.

- Completed three days "FDP for Student Induction (FDP-SI)" organized by AICTE from 27-08-2018 to 29-08-2018.
- Attended Quality Improvement Program short term course on "Electrochemical Energy Generation and Storage Materials", conducted by Department of Chemical Engineering, IIT Kanpur from 14-08-2019 to 18-08-2019.
- Participated one-week online FDP on "Challenges and Opportunities in Recent Emerging Technologies" conducted by Shri Guru Gobind Singhji Institute of Engineering & Technology, Nanded from 06-07-2020 to 10-07-2020.
- Completed 20 days internship program in the first virtual summer school on "Nanoscience and Nanomaterials" organized by National Centre for Nanoscience and Nanotechnology, University of Madras from 10-07-2020 to 30-07-2020.
- Completed two weeks FDP on "Managing Online Classes and Co-Creating MOOCS 3.0" organized by Teaching Learning Centre, Ramanujam College, Delhi from 25-07-2020 to 10-08-2020.
- Participated in a two weeks online FDP on "ICT tools for teaching, learning process and institute" organized by Electronics and ICT Academies from 10-08-2020 to 21-08-2020.
- Attended Government officials training program on "Industrial training in additive manufacturing & its applications", conducted by National Institute of Electronics and Information Technology (NIELT), Calicut from 02-02-2022 to 15-02-2022.
- Participated in a one-week training program on R & D equipment on the theme "Structural identification of compounds by analytical techniques" organized by Central Research Instrumentation Facility (CRIF), NIT Warangal from 19-07-2022 to 25-07-2022.

**Invited Lectures Delivered:**

- ✓ Delivered a special lecture on **"Renewable Energy and Its Applications"** organized by the Department of Physics & Mathematics, Meenakshi Chandrasekaran College of Arts and Science, Pattukkottai – 614 626 ($15^{th}$ February 2010).
- ✓ Delivered an invited speak on **"Introduction to Nonlinear OpticalMaterials and Bimetallic Thiocyanates"** at DST Sponsored National Seminar on Recent Trends in Physics, Shivani Engineering College, Tiruchirappalli, March – 18-19, 2011.

- ✓ Delivered a special lecture on **"Crystal Growth and its Applications"** at Mookambigai College of Engineering, Tiruchirappalli, November 10, 2011.
- ✓ Delivered a lecture on **"Basic Concept of Spectroscopy"** at Sri Saradha College for Women, Perambalur, February 9, 2012.
- ✓ Delivered invited lecture on **"The pristine applications of Science in Technology for future applications"** at Bon Secures College, Tanjore, July 19, 2012.
- ✓ Delivered a invited lecture on **"Research methodology in crystal growth and characterization"** at Sardar Raja College of Engineering, Alangulam, August 18, 2012.
- ✓ Delivered invited lecture on "**Development of metallo-organic NLO crystals for frequency conversion applications"** at Srimathi Indra Gandhi College for Women, Trichy, August 28, 2012.
- ✓ Delivered invited lecture on **"Frequency conversion applications of Lewis base adducts of metal-organic nonlinear optical single crystals"** at CSIR sponsored National seminar on novel materials (NSNM 2013), Shivani Engineering College, Tiruchirappalli, March 19, 2013.
- ✓ Delivered a Special Lecture on **"Transistor based Electronic Circuits and their Applications"** at two days Skill Based Training Programme, organized by the Entrepreneurship Development Cell and Department of Physics, Mother Teresa Women's University, Kodaikanal, 12-09-2013 and 13-09-2013.
- ✓ Delivered a Invited Lecture on **"Development of Metallo – Organic NLO Crystals and their Applications"** at Curriculum Development Cell sponsored two days Workshop on Research in Crystal Growth Processes and Methods, organized by the Department of Physics, Mother Teresa Women's University, Kodaikanal, 23-09-2013 and 24-09-2013.
- ✓ Delivered a **Chief Guest address** at Thirumalai Engineering College, Kanchipuram for the Inauguration of EMPAC Association, 09-11-2013.
- ✓ Delivered a guest lecture on "**Basic methods of crystal growth**" at cluster college meeting, organized by the Department of Physics, ANJA College, Sivakavi, 15-02-2014.
- ✓ Delivered an invited lecture on **FT-IR** at Hands on Training Programme on sophisticated instruments, organized by the Department of Pharmaceutical Technology, Anna University BIT Campus, Tiruchirappalli, 20-02-2015.

- ✓ Served as session chair in the two days "International conference on Advancements in computing and communication Technologies" at Anna University BIT Campus, Trichy (10, 11-04-2015)
- ✓ Served as resource person in Two weeks Faculty Development Programme on Comprehensive Approach of Biotechnological Applications, organized by the Biotechnology department, Anna University BIT Campus, Trichy (24-04-2015)
- ✓ Given Hands on training for the synthesis of organic compounds at Anna University BIT Campus on 19-07-2015. (ARMETA)
- ✓ Given Hands on training for the synthesis of nanoparticles at Anna University BIT Campus on 26-07-2015. (ARMETA)
- ✓ Delivered an invited lecture on **Basics of nonlinear optics and methods of crystal growth"** at Anna University BIT Campus on 27-07-2015. (ARMETA)
- ✓ Delivered an invited lecture on **Basic Techniques in Crystal Growth** at Department of Physics, Mother Teresa Women's University, Kodaikanal, 24-8-2016.
- ✓ Served as judge for the oral presentation in National Conference on Advanced Materials (NCAM 2016) at Department of Physics, St. Joseph's College, Trichy on 07-10-2016.
- ✓ Delivered a guest lecture on **Awareness of Media** for the NSS students of Mother Teresa Women's University, Kodaikanal, 16-02-2017.
- ✓ Delivered an invited lecture on **Green Mediated Synthesis of Metaloxide Nanoparticles for Biological Applications,** at Department of Bio-Chemistry, Holy Cross College, Trichy, 22-03-2017.
- ✓ Served as Chief guest and delivered an invited lecture on Basic methods of crystal growth & development of organic NLO Crystals for electro optical applications at Department of Physics, Periyar University PG extension centre, Dharmapuri, 02-08-2017.
- ✓ Served as chairperson for the oral presentation of the International seminar on Materials Science and Technology-2017 on 04-08-2017 at Mother Teresa Women's University Kodaikanal.
- ✓ Delivered an invited lecture on **Development of Nanoparticles and Nanocomposites for Electrical Applications,** at National Conference on Preparation and Characterization of Crystalline Materials (NCPCCM - 2017),Government Arts College, Tiruvannamalai, 06-09-2017.

- ✓ Served as resource person and delivered a lecture on **Synthesis of Nanoparticles for Electrical and Biological Applications,** at two days skill training programme on preparation and demonstration of a nano robot for agriculture fields and smart irrigation, at Mother Teresa Women's University, Kodaikanal, 11-09-2017
- ✓ Delivered a guest lecture on **Synthesis of nano materials for electrical and biological applications** at Department of Physics, St. Joseph's College, Trichy, 04-10-2017.
- ✓ Delivered an invited lecture on **Synthesis of metaloxide nanoparticles and their biological applications** at 6$^{th}$ National Conference on Emerging Trends and New Challenges in Biotechnology – Advances in Biomaterials and Applications, Department of Bio-Technology, MGR College, Hosur, 01-02-2018.
- ✓ Delivered an invited lecture on **Synthesis of metal oxide core-shell nanoparticles and their electrical properties** at 5$^{th}$ International Conference on Nanomaterials and Nanocomposites, Department of Physics, VIT University, Chennai, 09-02-2018.
- ✓ Delivered an invited lecture on **Development of metallo-organic NLO crystals for frequency conversion applications**, at Department of Physics, Lakshmipuram College, Nagercoil, 01-03-2018.
- ✓ Delivered a invited lecture on "Synthesis and growth of Mannich base organic nonlinear optical material for frequency conversion applications" at National Conference on Advances in Materials Research (NCAMR-18), SRMIST, Vadapalani Campus, Chennai (27, 28-04-2018)
- ✓ Delivered an Invited lecture on Applications of FT-IR spectrometer in the characterization of pharmaceuticals at Hands on training programme Eruditio 19, 26-01-2019.
- ✓ Served as judge for oral presentation for Physics Colloquium JOSPHY'09, organized by the department of Physics, St. Joseph's College, Trichy. (22-02-2019)
- ✓ Served as resource person for the state level seminar on Advancements in Physics and delivered a lecture on Advancements in nanotechnology at St. Jerome's College, Nagercoil, 27-02-2019.

- ✓ Delivered a lecture on Scientific Methods at one day seminar on the Role of Science in Engineering organized by the Department of Science & Humanities, Anna University Regional Campus, Tirunelveli, 28-02-2019.
- ✓ Delivered a special lecture on "Importance of nanomaterials for supercapacitor and biological applications" at Department of Physics, Mother Teresa Women's University, Kodaikanal (12-09-2019).

**International conferences attended:**

1. International Conference on Lasers & Their Applications (INCOLA – 2000) organized by the Department of Physics, St. Joseph's College (Autonomous), Tiruchirappalli – 620 002. (March 1- 4, 2000)
2. XXXI Symposium of the Optical Society of India, International Conference on Optics and Optoelectronics (ICOL-2005) held at IRDE, Dehradun (Dec 12 –15, 2005).
3. Eighth International Conference on Optoelectronics, Fiber Optics and Photonics (PHOTONICS 2006), Organized by HyderabadUniversity, Hyderabad (Dec 13 – 16, 2006).
4. International conference on Functional Materials for Advanced Technology (ICFMAT – 2009), Organized by VelammalEngineeringCollege, Chennai – 600066, 29$^{th}$& 30$^{th}$ January 2009.
5. International conference on Materials Science and Technology (ICMST 2012), Organized by St. Thomas College, Pala, Kottayam, Kerala – 686 574, June 10 – 14, 2012.
6. International conference on Advances in New Materials (ICAN 2014), Organized by Department of Inorganic Chemistry, University of Madras, Chennai – 600 025, June 20 & 21, 2014.
7. International conference on Materials Science and Technology (ICMST 2016), Organized by St. Thomas College, Pala, Kottayam, Kerala – 686 574, June 5 – 8, 2016.

**National conferences and seminars attended:**

1. Seminar on "Uses of Renewable Energy & Energy Conservation for Educational Institutions" held at Thiagarajar College of Engineering, Madurai.(Dec 13, 2003).
2. DAE Solid State Physics Symposium held at Gurunanak Dev University, Amristar. (December 26$^{th}$ – 30$^{th}$, 2004).

3. National Symposium on Crystal Growth and Characterization held at LoyolaCollege, Chennai. (September 29th& 30th, 2005).
4. 5th DAE – BRNS National Laser Symposium (NLS – 2005) held at VIT, Vellore (December 7th – 10th, 2005).
5. National conference on Preparation and Characterization of Crystalline Materials (PADIKA 2006) held at S.T.HinduCollege, Nagercoil. (January 19th – 21st, 2006).
6. Seminar on Future Trends in Materials and Characterization held at LoyolaCollege, Chennai. (February 28th, 2006).
7. Workshop on Thin film Technology (WOTT-2006) held at National Institute of Technology, Trichy (NITT). (March 24th& 25th, 2006).
8. National Conference on Application Oriented Materials (NCAOM 2006) held at SRM Institute of Science and Technology, Deemed University, Kattankulathur – 603 203. (April 21st& 22nd, 2006).
9. National conference on Advances in Technologically Important Crystals, held at Department of Physics, Delhi University, Delhi – 110 007 (October 12th – 14th, 2006).
10. 11th National seminar on Crystal Growth, held at SSN College of Engineering, SSN nagar, Chennai – 603 110 (December 7th – 9th, 2006).
11. Second National Symposium on Nonlinear Optical Crystals and Modeling in Crystal Growth, held at Department of Physics, Anna University, Chennai – 600 025 (March 26th& 27th, 2007).
12. National seminar on Advances in Materials Science, held at Department of Physics, Loyola College, Chennai – 600 034 (February 28th, 2007).
13. Seminar on Curriculum Development – New Perspectives and Innovative Approaches, held at St. Xavier's College, Palayamkottai – 627 002 (September 21st& 22nd, 2007).
14. 7th DAE – BRNS National Laser Symposium (NLS – 7), held at Applied Physics department, Faculty of Technology and Engineering, The M. S. University of Baroda, Vadodara (December 17th – 20th, 2007).
15. 52nd DAE Solid State Physics Symposium held at University of Mysore, Mysore (December 27th – 31st, 2007).
16. Seminar on Teacher Empowerment for Classroom Effectiveness held at St. Xavier's College, Palayamkottai – 627 002 (February 1st and 2nd, 2008).

17. Fourth State level seminar on Recent Advances in Physics held at Scott Christian College, Nagercoil – 629 003 (February 22nd, 2008).
18. 6th National Conference on Emerging Trends in Crystal Growth and Nano Materials (NECAN – 2008) held at Department of Physics, Loyola College, Chennai – 600 034 (February 28th& 29th, 2008).
19. National Seminar on Recent Advances in Physics held at Department of Physics, St. Xavier's College, Palayamkottai – 627 002.
20. Bridge course on Physics conducted by Anna University, Chennai – 600 025 (June 20th and 21st, 2014).

## PUBLICATIONS

**Number of research papers published in International Journals : 69**

**Number of research papers published in National Journals : 3**

**Number of research papers Presented in International Conferences : 12**

**Number of research papers Presented in National Conferences : 63**

**Number of research Scholars completed PhD degree : 7**

**Number MTech Projects guided : 4**

### Papers Published in International Journals:

1. Pure and Al-Bi Co-doped SnO2 Nanoparticles as Bacterial Inhibitors: Anuja E., Pramothkumar A., R. Brindha and **Vetha Potheher I., Toxicological & Environmental Chemistry (2022) https://doi.org/10.1080/02772248.2022.2117361**
2. A comparative analysis on electrical and nonlinear optical properties of pure and Co-Ni co-doped $Sno_2$ nanoparticles: A. Pramothkumar, E. Vivek, T. C. Sabari Girisun, M. Meena, **I. Vetha Potheher, Optical Materials 130 (2022) 112546**
3. Optical and electrical properties of pure and doped tin oxide nanoparticles: T. Amutha, M. Rameshbabu, E. Manikanadan, S. Sasi Florence**, I. Vetha Potheher** and K. Prabha, **Particulate Science and TechnologyDOI: 10.1080/02726351.2022.2080618**
4. Green and sustainable preparation of flower like ZnO nanstructures via soft bio-template approach for the enhancement of biomedical applications, N. Senthilkumar, E. Nandhakumar, P. Priya, M. Selvakumar, **I. Vetha Potheher, Journal of Applied Physics A128(2022) 1-15.**

5. Samarium hydroxide nanorolls anchored graphitic carbon nitride nanosheets: An active electrode material for supercapacitors: E. Vivek, A. Arulraj, Mohammad Khalid, **I. Vetha Potheher**, **Journal of Alloys and Compounds 908 (2022) 164541**
6. Novel nanostructured $Nd(OH)_3$/g-$C_3N_4$ nanocomposites (nanorolls anchored on nanosheets) as reliable electrode material for supercapacitors: E. Vivek, A. Arulraj, Syam G. Krishnan, Mohammad Khalid and **I. Vetha Potheher, Energy and Fuels (2021), Accepted and article in press)**
7. Sensitivity enhancement in rGO/$Mn_3O_4$ hybrid nanocomposites: A modified glassy carbon electrode for the simultaneous detection of dopamine and uric acid: G. Vinodhkumar, Sujin P. Jose, S. Logeswarareddy, C. Sekar, **I. Vetha Potheher**, A. Cyrac Peter, **Synthetic Metals 280 (2021) 116859.**
8. 2-Methyl-4-Nitroaniline Derived Novel Organic NLO Crystal: Experimental and Theoretical Analysis: M. Shankar, K. Thirupugalmani, K. Nehru, S. Athimoolam, V. Tamilmani and **I. Vetha Potheher, Journal of Molecular Structure 1243 (2021) 130905.**
9. Facile synthesis of 2D $Ni(OH)_2$ anchored g-$C_3N_4$ as electrode material for high-performance Supercapacitor: E. Vivek, A. Arulraj, Mohammad Khalid and **I. Vetha Potheher, Inorganic Chemistry Communication 130 (2021) 108704.**
10. Sunlight driven rapid and facile synthesis of silver nanoparticles using Allium Ampeloprasum extract with enhanced antioxidant and antifungal activity: V. Uma Maheshwari Nallal, K. Prabha, **I. Vetha Potheher**, Balasubramani Ravindran, Alaa Baazeem, Soon Woong Chang, Gloria Aderonke Otunola, M. Razia, **Saudi Journal of Biological Sciences 28 (2021) 3660-3668**
11. A study on the electrical, magnetic and optical limiting behaviour of pure and Cd-Fe co-doped CuO NPs: A. Pramothkumar, N. Senthilkumar, R. Mary Jenila, M. Durairaj, T. C. Sabari Girisun, **I. Vetha Potheher,Journal of Alloys and Compounds 878 (2021) 160332.**
12. Solvothermal synthesis of magnetically separable reduced graphene oxide/$Fe_3O_4$ hybrid nanocomposites with enhanced photocatalytic properties: G. Vinodhkumar, J. Wilson, S. S. R. Inbanathan, **I. Vetha Potheher**, Muthupandian Ashokkumar and A. Cyrac Peter, **Physica B: Condensed Matter 580 (2020) 411752.**
13. A Comparative Analysis on the Dye Degradation efficiency of Pure, Co, Ni and Mn-Doped CuO Nanoparticles, A. Pramothkumar, N. Senthilkumar, K. C. Mercy

Gnana Malar, M. Meena, and I. Vetha Potheher, **I. Vetha Potheher**, **Journal of Materials Science: Materials in Electronics 30 (2019) 19043 – 19059.**

14. Synthesis of flower-like copper oxide microstructure and its photocatalytic property, E. Vivek, N. Senthilkumar, A. Pramothkumar, M. Vimalan and **I. Vetha Potheher, Physica B: Condensed Matter 566 (2019) 96 – 102.**
15. Synthesis of reduced graphene oxide/$Co_3O_4$ nanocomposite electrode material for sensor application, G. Vinodhkumar, R. Ramya, **I. Vetha Potheher**, M. Vimalan and A. Cyrac Peter, **Research on Chemical Intermediates 45 (2019) 3033-3051.**
16. Studies on optical, electrical, mechanical and theoretical investigation of 4-nitro-benzoic acid (3-ethoxy-2-hydroxy-benzylidene)-hydrazide: A novel Schiff base organic NLO material, M. Shankar, A. Dennis Raj, R. Purusothaman, M. Vimalan, S. Athimoolam and **I. Vetha Potheher, Journal of Molecular Structure 1181 (2019) 348 – 359.**
17. Studies on Structural and Optical properties of pure and Transition Metals (Ni, Fe and Co-Doped Ni-Fe) Doped Tin Oxide ($SnO_2$) Nanoparticles for Anti-microbial Activity, T. Amutha, M. Rameshbabu, S. Sasi Florence, N. Senthilkumar,**I. Vetha Potheher** and K. Prabha, **Research on Chemical Intermediates 45 (2019) 1929-1941.**
18. Studies on Electrochemical Properties of Hetarolite ($ZnMn_2O_4$) Nanostructure for Supercapacitor Application, N. Senthilkumar, V. Venkatachalam, M. Kandiban, P. Vigneshwaran, R. Jayavel and **I. Vetha Potheher, Physica E: Low-dimensional systems and nanostructures 106 (2019) 121 – 126.**
19. Reduced graphene oxide based on simultaneous detection of neurotransmitters: G. Vinothkumar, R. Ramya, M. Vimalan, **I. Vetha Potheher** and A. Cyrac Peter, **Progress in Chemical and Biochemical Research 1 (2018) 40-49.**
20. Characterization, antibacterial, anti-arthritic and in-vitro cytotoxic potentials of biosynthesized Magnesium Oxide nanomaterial: B. Balraj, N. Senthilkumar, **I. Vetha Potheher,** M. Arulmozhi, **Materials Science & Engineering B 231 (2018) 121 – 127**.
21. Synthesis, crystal growth, thermal and laser damage threshold properties of new Schiff base NLO material 4-Nitro-benzoic acid (3-ethoxy-2-hydroxy-benzylidene)-hydrazide: M. Shankar, A. Dennis Raj, M. Jeeva, R. Purusothaman, M. Vimalan, **I. Vetha Potheher, Materials Letters 232 (2018) 113 – 117.**

22. Green mediated synthesis of plasmonic nanoparticle (Ag) for antireflection coating in bare mono silicon solar cell: N. Senthilkumar, A. Arulraj, E. Nandhakumar, M. Ganapathy, M. Vimalan and **I. Vetha Potheher**, **Journal of Materials Science: Materials in Electronics29 (2018) 12744 – 12753.**
23. Coriandrum Sativum Mediated Synthesis of Silver Nanoparticles and Evaluation of their Biological Characteristics: N. Senthilkumar, V. Aravindhan, K. Ruckmani and I. Vetha Potheher, **Materials Research Express 5 (2018) 055032.**
24. Two step synthesis of ZnO/Ag and ZnO/Au Core/Shell Nanocomposites: Structural, Optical and Electrical property Analysis: N. Senthilkumar, M. Ganapathy, A. Arulraj, M. Meena, M. Vimalan, **I. Vetha Potheher, Journal of Alloys and Compounds 750 (2018) 171-181.**
25. Studies on optical and electrical properties of green synthesized $TiO_2$@Ag core-shell nanocomposite material: M. Ganapathy, N. Senthilkumar, M. Vimalan, R. Jeysekaran and **I. Vetha Potheher, Materials Research Express 5 (2018) 045020**
26. A comparative analysis on optical, photo luminescence and laser damage properties of conventional and uniaxial method grown semi organic nonlinear optical material – sodium potassium tartrate tetrahydrate: R. Purusothaman, M. Shankar, A. Dennis Raj, M. Vimalan, K. Rajarajan and **I. Vetha Potheher, Materials Research Innovations 23(2019) 172-181**
27. Synthesis of ZnO Nanorods by One Step Microwave-Assisted Hydrothermal Route for Electronic Device Applications:N. Senthilkumar, E. Vivek, M. Shankar, M. Meena, M. Vimalan and **I. Vetha Potheher**, **Journal of Materials Science: Materials in Electronics29 (2018) 2927-2938**
28. Synthesis of ZnO nanoparticles using leaf extract of Tectona grandis (L.) and their anti-bacterial, antiarthritic,anti-oxidant and in vitro cytotoxicity activities: N. Senthikumar, E. Nandhakumar, P. Priya, D. Soni, M. Vimalan and **I. Vetha Potheher, New Journal of Chemistry 41 (2017) 10347-10356**
29. Equilibrium studies on removal of lead (II) ions from aqueous solution by adsorption using modified red mud: S. Lakshmi Narayanan, G.Venkatesan and **I. Vetha Potheher, International Journal of Environmental Science and Technology 15 (2018) 1687-1698.**
30. Synthesis, Growth, Physicochemical properties and DFT calculations of 2-naphthol substituted Mannich base 1-(morpholino(phenyl) methyl) naphthalen-2-ol:A Non linear Optical Single crystal: A. Dennis Raj, M. Jeeva, M. Shankar, G. Venkatesa

Prabhu, M. Vimalan, **I. Vetha Potheher, Journal of Molecular Structure 1147 (2017) 763 – 775.**

31. ZnO/$Ni(OH)_2$ Core-Shell Nanoparticles: Synthesis, Optical, Electrical and Photoacoustic Property Analysis: N. Senthil Kumar, M. Ganapathy, S. Sharmila, M. Shankar, M. Vimalan, **I. Vetha Potheher**, **Journal of Alloys and Compounds 703 (2017) 624-632.**
32. 1-((4-methylpiperazin-1-yl)(phenyl)methyl)naphthalen-2-ol: A novel Mannich base organic NLO crystal for the analysis of electro-optic applications: A. Dennis Raj, M. Jeeva, R. Purusothaman, G. Venkatesa Prabhu, M. Vimalan and **I. Vetha Potheher**, **Journal of Materials Science: Materials in Electronics 28 (2017) 7802-7810.**
33. Study on the L-Lysine-Iodic acid: Semi Organic Non Linear Optical Single Crystals for Electro-Optic Applications: M. Kumar, R. Kanagadurai, S. Chithra, S. Tamilselvan, **I. Vetha Potheher** and M. Vimalan**Journal of Materials Science: Materials in Electronics 28 (2017) 5154-5164.**
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