

CURRICULUM VITAE

Dr. B. Vijaya Kumar

Assistant Professor
Department of Chemistry
University College of Science
Osmania University
Hyderabad, Telangana -500007, INDIA
Email: vijaychemou@osmania.ac.in
Phone: +91-9966442958



1. Name : **Dr. B. Vijaya Kumar**
2. Father's Name : **Somla**
3. Mothers Name : **Bharathi**
4. Date of Birth : **01 July 1982**

5. Educational Qualifications

Degree	College/University	% Marks	Year of Passing
SSC	Board of Secondary Education	68	1998
Intermediate	Bord of Intermediate	73	2000
B.Sc.,	Kakatiya University	78	2004
M.Sc.,	Kakatiya University	70	2006
PhD	Osmania University		
Thesis title	“Synthesis and Spectral Characterization of Pyrochlore (A ₂ B ₂ O ₇) type compounds”		2011
Supervisor Name	Prof. M. Vithal		

6. Professional Experience

Position	Duration	Institution	Responsibilities
Research Associate	9 th Aug 2011 to 5 th April 2012	Osmania University, Hyderabad	Preparation of metal oxides and Photocatalysis applications
Assistant Professor	16 th April 2012 to 12 th Sep 2013	National Institute of Technology, Warangal.	Teaching M.Sc., Students and B Tech Students
Assistant Professor	13 th Sep 2013 to till date	Osmania University, Hyderabad	Teaching M.Sc., Students

7. Teaching Experience

S.No.	Course Taught	Semester
1.	Chemical Kinetics I	I
2.	Electrochemistry I	I
3.	Chemical Kinetics II	IV

4.	Applied Electrochemistry	IV
----	--------------------------	----

8. Resource persons

Guest Lectures/ Extension Lectures	Name of Program	Organization / Institution	Date and Year
Guest Lecture	M.Sc.,	AMS	20-03-2015
Guest Lecture	M.Sc.,	PG College, Mirzapur	01-04-2015
Resource Person	Refresher Course	HRDC, Osmania University, Hyderabad	17-10-2022

9. Career Development Programs:

Course attended	Institution /University	Duration (From—To)
Orientation Course	HRDC (Academic Staff College), Osmania University	10-12-2013 to 08-01-2014
Refresher Course	HRDC (Academic Staff College), Osmania University	08-02-2017 to 01-03-2017
Refresher Course	HRDC (Academic Staff College), Osmania University	15-02-2018 to 08-03-2018
Refresher Course	Ramanujan College, University of Delhi	21-06-2022 to 05-07-2022
Faculty Development Program	Anwalululoom College, Osmania University, Hyderabad	27-01-2021 to 02-02-2021
Faculty Development Program	Centre for Advanced Computational Chemistry Studies, Delhi	05-10-2022 to 11-10-2022

10. Research Supervision

S.No.	Name of the Student	Nature of fellowship	Date of joining	Status
1	D. Ravinder Reddy	No Fellowship	23-03-2017	Ongoing
2	B. Kranthi Kumar	JRF-CSIR	13-02-2017	Ongoing
3	Vasanth Rao	RGNF	10-04-2017	Ongoing
4	M. Shekar Babu	JRF-CSIR	29-12-2017	Ongoing
5	Swarupa Guda	No Fellowship	12-09-2018	Ongoing
6	N. Anuradha	No Fellowship	18-09-2018	Ongoing

11. Awards/Honors

S.No.	Name of Award	Awarding Agency
1.	Associate Fellow	Telangana Academy of Sciences

12. Memberships

S.No.	Membership	Awarding Agency
1.	Life member of Indian Science Congress	Indian Science Congress Association
2.	Indian Council of Chemists (LF/1846)	Indian Council of Chemists
3.	Materials Research Society of India	Materials Research Society of India

13. Research Projects

Title of Project	Funding Agency	Amount	Duration	Year
Development of tunable p-n heterojunctions for gas sensing and photocatalytic applications	DST-SERB-SURE	2468370/-	Three Years	2023-2026
Development of g-C ₃ N ₄ /Lanthanide Doped Tungsten Metal oxide-based hybrid nanocomposites for Photoluminescence and Photocatalysis Applications	DST-EMR	13,20,000/-	Three Year	2017-20
Synthesis, Characterization, Photocatalytic activity and Photoluminescence of Spinel type Compound	UGC	6,00,000/-	Two Years	2014
Synthesis, Characterization, Luminescence and Photocatalytic activity of Y ₂ Ti ₂ O ₇ : Ln ³⁺ (Ln = Pr, Sm, Eu, Gd and Tb)	MHRD	3,50,000/-	One Year	2013

14. Research Interest

- ◆ Preparation of Novel semiconductor photocatalysts by hydrothermal and sol-gel methods
- ◆ Construction of heterostructures
- ◆ The effect of doping on photocatalytic activity
- ◆ Preparation of core-shell nanostructures and study of their photocatalysis
- ◆ Preparation of sulfide contains semiconductors and study of their gas sensing properties.

15. List of Research Publications

S.No.	Publication Details
41	G. Swarupa, N. Anuradha, K. Narsimha, Kathi Sudarshan, G. Upender B. Vijaya Kumar , Enhanced Photocatalytic Efficiency of BaTiO ₃ Augmented by ZnS Nanospheres via Type-II Heterojunction for Methyl Orange Degradation, <i>Mater. Sci. Semicond. Process (Accepted)</i> , <i>I.F: 4.2</i>

40	E. Praveen Kumar, N. Chanakya, Ayesha Siddiqua, Kurugundla Gopi Krishna, B. Vijaya Kumar , P. Muralikrishna, G. Upender, Investigations on MWO_4 ($\text{M} = \text{Cu, Zn, Cd and Sn}$) nanostructures for detecting toluene gas at room temperature, <i>Sensors & Actuators: A. Physical</i> 368 (2024) 115094, I.F: 4.6, doi.org/10.1016/j.sna.2024.115094
39	D. Satya Vardhan, Ch Sameera Devi, P. Nagaraju, P. Muralikrishna, B. Vijaya Kumar , G. Upender, Room temperature sensing of ammonia and formaldehyde gases through novel anisotype heterojunction of $\text{p-Co}_3\text{O}_4/\text{n-Gd}_{0.1}\text{Ce}_{0.9}\text{O}_{2-8}$ as highly responsive and stable sensors, <i>Materials Chemistry and Physics</i> 313 (2024) 128694, I.F: 4.6, doi.org/10.1016/j.matchemphys.2023.128694.
38	Amgoth Vasanth Rao, K. Narsimha, G. Swarupa, N. Anuradha, B. Kranthi Kumar, D. Ravinder Reddy, G. Upender, B. Vijaya Kumar , Sn doped CdWO_4 Augmented photodegradation of methyl orange, <i>Materials Letters</i> 353 (2023) 135304, doi.org/10.1016/j.matlet.2023.135304
37	T. Nagesh, K. Ramesh, B. Ashok, L. Jyothi, B. Vijaya Kumar , G. Upender, Insights into charge transfer via Z-scheme for Rhodamine B degradation over novel $\text{Co}_3\text{O}_4/\text{ZnFe}_2\text{O}_4$ nanocomposites, <i>Optical Materials</i> 143 (2023) 114140, https://doi.org/10.1016/j.optmat.2023.114140, I.F: 3.9.
36	Kranthi Kumar Bedala, Prasad Gonugunta, Mohammad Soleimani, Eszter Madai, Peyman Taheri, Sandeep Kumar Padamati, P. Nagaraju, G. Upender, B. Vijaya Kumar , Facile synthesis of $\text{ZnIn}_2\text{S}_4/\text{Cu}_2\text{O}$ hierarchical heterostructures for enhanced selectivity and sensitivity of NH_3 gas at room temperature, <i>Appl. Surf. Sci.</i> 640 (2023) 158315, I. F:6.7
35	B. Ashok, K. Ramesh, D. Madhu, T. Nagesh, B. Vijaya Kumar , G. Upender, Characterization and photocatalysis of visible-light-driven Z-scheme $\text{Bi}_2\text{WO}_6/\text{Bi}_2\text{MoO}_6$ heterojunction for Rhodamine B degradation, <i>Inorg. Chem.Comm.</i> 150 (2023) 110495, I.F:3.428, doi.org/10.1016/j.inoche.2023.110495
34	Ravinder Reddy Danda, P. Muralidhar Reddy, A. Krishnam Raju, V. Naveen Reddy, K. Santosh Kumar and B. Vijaya Kumar, Acetic Acid-Water Mediated Efficient One-Pot Synthesis of Functionalized Isoxazolyl Amino Chromeno[4,3-b]pyridine Derivatives, <i>Asian Journal of Chemistry</i> 35 (2023) 135-142, I.F: 0.16, doi.org/10.14233/ajchem.2023.26926
33	Kura Narsimha, N. Anuradha, Kathi Sudarshan, Ashish Chhaganlal Gandhi, A. Krishnam Raju, P. Muralidhar Reddy, Radhika Mone, G. Upender, B. Vijaya Kumar , One – Pot Hydrothermal Preparation and Defects Enhanced Photocatalytic Activity of Bi doped CdWO_4 Nanospheres, <i>Phys.Chem.ChemPhys.</i> 24 (2022) 8775
32	K. Manjunatha, Tsu-En Hsu, Hsin-Hao Chiu, Tai-Yue Li, B. Vijaya Kumar , P. Muralidhar Reddy, Yu-Hao Wu, Bi-Hsuan Lin, Artashes Karmenyan, Chia-Liang Cheng, Ashish Chhaganlal Gandhi and Sheng Yun Wu, Precise Sn-Doping Modulation for Optimizing CdWO_4 Nanorod Photoluminescence, <i>Int. J. Mol. Sci.</i> 23 (2022) 15123, https://doi.org/10.3390/ijms232315123, I.F: 5.6.

31	Ashish Chhaganlal Gandhi, Hsin-Hao Chiu, Ming-Kang Ho, Tsu-En Hsu, Tai-Yue Li, Yu-Hao Wu, B. Vijaya Kumar , P. Muralidhar Reddy, Bi-Hsuan Lin, Chia-Liang Cheng, and Sheng Yun Wu “Modulation of Magnetic and Luminescence Properties via Control Cu-Doped in CdWO ₄ Nanorods for Photocatalytic Applications” <i>ACS Applied nanomaterials</i> 10 (2022) 14811.
30	Tai-Yue Li, Ming-Kang Ho, Tus-En Hsu, Hsin-Hao Chiu, Kuan-Ting Wu, Jen-Chih Peng, Chun-Ming Wu, Ting Shan Chan, B. Vijaya Kumar , P. Muralidhar Reddy, Shyue-Chu Ke, Chia-Liang Cheng, Ashish Chhaganlal Gandhi, Sheng Yun Wu “Antiferromagnetic spin correlations above the bulk ordering temperature in NiO nanoparticles: Effect of extrinsic factors” <i>Appl. Surf. Sci.</i> 578 (2022) 152081.
29	A. Sanjeev, N. N. Reddy, S. Bhaskar, R. Rohini, A. K. Raju, B. V. Kumar , A. Hu, P. M. Reddy, Synthesis and Anticancer Activity of 3,4,5-Trimethoxycinnamamide-Tethered 1,2,3-Triazole Derivatives, <i>Russ J Org Chem</i> 58 (2022) 87–93.
28	M. Anand Pandarinath, P. Muralikrishna, D. Suresh Babu, B. Vijaya Kumar , G. Upender “Vibrational, thermal and optical studies of 30TeO ₂ -39.5B ₂ O ₃ -(30-x)ZnO-xLi ₂ O-0.5V ₂ O ₅ (0=x =30 mol%) glass system”, <i>J Non-Cry. Solids</i> 566 (2021) 120875, IF: 4.458 https://doi.org/10.1016/j.jnoncrysol.2021.120875
27	Sampath Bitla, Akkiraju Anjini Gayatri, Muralidhar Reddy Puchakayala, Vijaya Kumar Bhuky , Jagadeshwar Vannada, Ramulu Dhanavath, Bhaskar Kuthati, Devender Kothula, Someswar Rao Sagurthi, Krisham Raju Atcha” Design and synthesis, biological evaluation of bis-(1,2,3- and 1,2,4)-triazole derivatives as potential antimicrobial and antifungal agents” <i>Bioorg. Med. Chem. Lett.</i> 41 (2021) 128004,
26	S. P. Sai Sushma, G. Swarupa, T. Nagesh, Someshwar Pola, P. Rajitha, B. Vijaya Kumar and G. Upender, “Enhanced photocatalytic activity of CdWO ₄ /BaTiO ₃ heterostructure for Dye degradation”, <i>New J. Chem.</i> 45 (2021) 19723-732, IF3.591, doi.org/10.1039/D1NJ01556G
25	Ashish Chhaganlal Gandhi, Tai-Yue Li, B. Vijaya Kumar , P. Muralidhar Reddy, Jen-Chih Peng, Chun-Ming Wu, and Sheng Yun Wu, “Room Temperature Magnetic Memory Effect in Cluster-Glassy Fe-doped NiO Nanoparticles”, <i>Nanomaterials</i> 10 (2020) 1318.
24	Sampath Bitla, Someswar Rao Sagurthi, Ramulu Dhanavath, Muralidhar Reddy Puchakayala, Saritha Birudaraju, Akkiraju Anjini Gayatri, Vijaya Kumar Bhukya , Krisham Raju Atcha “Design and synthesis of triazole conjugated novel 2,5-diaryl substituted 1,3,4-oxadiazoles as potential antimicrobial and anti-fungal agents” <i>J.Mol.Structure</i> , 1220 (2020) 128705.
23	K. Sateesh Reddy, Bandi Siva, S. Divya Reddy, N. Reddy Naresh, T. V. Pratap, B. Venkateswara Rao, Yi-An Hong, B. Vijaya Kumar , A. Krishnam Raju, P. Muralidhar Reddy, Anren Hu “In Situ FTIR Spectroscopic Monitoring of the Formation of the Arene Diazonium Salts and Its Applications to the Heck–Matsuda Reaction” <i>Molecules</i> 25 (2020) 2199.
22	Kura Narsimha, M. Shekar Babu, N. Anuradha, Swarupa Guda, B. Kranthi Kumar, D. Mallesh, G. Upender, P. Muralidhar Reddy, B. Vijaya Kumar , “Preparation and Characterization of CdWO ₄ :Cu Nanorods with Enhanced Photocatalytic performance under sunlight Irradiation” <i>New J. Chem.</i> , 44 (2020) 2380.
21	B. Vijaya Kumar , Muvva D.Prasad, M. Vithal, “Enhanced visible light photocatalytic activity of Sn doped Bi ₂ WO ₆ Nanocrystals” <i>Mat. Lett.</i> 152 (2015) 200.
20	Banoth Paplal, Sakkani Nagaraju, Veerabhadraiah Palakollu, Sriram Kanvah, B. Vijaya Kumar and Dhurke Kashinath, “Synthesis of functionalized 1,2,3 Triazoles using Bi ₂ WO ₆ nanoparticles as efficient and reusable heterogeneous catalysts in aqueous medium”, <i>RSC Adv.</i> , 5 (2015) 57842.

19	Banoth Paplal, S. Nagaraju, Palakollu Veerabhadraiah, Kodam Sujatha, Sriram Kanvah, B. Vijaya Kumar and Dhurke Kashinath, "Recyclable Bi ₂ WO ₆ nanoparticle mediated one-pot multicomponent reactions in aqueous medium at room temperature", <i>RSC Adv.</i> , 4 (2014) 54168
18	B. Vijaya Kumar , Radha Velchuri, G. Prasad, C. Bansal, M. Vithal, Preparation, Characterization, Photocatalytic activity and Conductivity of BiLnZr ₂ O ₇ (Ln = La, Sm, Eu and Gd)", <i>Mater. Chem. Physics</i> 136 (2012) 439-447.
17	B.V. Kumar , N.K. Veldurthi, J.R. Reddy, M. Vithal, "Solvothermal synthesis, Characterization, Luminescence and Photocatalytic activity of Bi ₂ WO ₆ : Eu nanocrystals" <i>Micro & Nano Letters</i> , 6 (2012) 544-548.
16	B. Vijaya Kumar , M. Vithal, "Luminescence (M = Mn ²⁺ , Cu ²⁺) and ESR (M = Gd ³⁺ , Mn ²⁺ , Cu ²⁺) of Na ₂ ZnP ₂ O ₇ : M", <i>Physica B</i> 407 (2012) 2094-2099.
15	B. Vijaya Kumar , Radha Velchuri, V. Rama Devi, B. Sreedhar, G. Prasad, D. Jaya Prakash, M. Kanagaraj, S. Arumugam, M. Vithal, "Preparation, Characterization, Magnetic susceptibility (Eu, Gd and Sm) and XPS studies of Ln ₂ ZrTiO ₇ (Ln = La, Eu, Dy and Gd)", <i>J. Solid State Chem.</i> 184 (2011) 264-272.
14	G. Ravi , Suresh Palla, J. R. Reddy , Naveen Kumar Veldurthi, B. Vijaya Kumar , M. Vithal "Photocatalytic and Conductivity Studies of Bi ³⁺ Substituted La ₂ Zr ₂ O ₇ ", <i>Int. J. Green Nanotech.</i> 4 (2012) 360-367.
13	B. Vijaya Kumar , Radha Velchuri, V. Rama Devi, G. Prasad, B. Sreedhar, C. Bansal, and M. Vithal "Preparation, characterization, emission (Eu ³⁺) and ESR (Gd ³⁺) studies of Y _{2-x} Ln _x Ti ₂ O ₇ (Ln = Eu and Gd, x = 0.0, 0.05)", <i>J. Applied Physics</i> 108 (2010) 044906
12	B. Vijaya Kumar , Radha Velchuri, G. Prasad, B. Sreedhar, K. Ravikumar, M. Vithal, "Preparation, characterization, photoactivity and XPS studies of Ln ₂ ZrTiO ₇ (Ln = Sm and Nd)" <i>Ceram. Inter.</i> 36 (2010) 1347-1355.
11	B. Vijaya Kumar , Radha Velchuri, G. Prasad, M. Vithal, "Preparation, Characterization, spectral and conductivity studies of Na ₃ MgZr (PO ₄) ₃ and Na _{0.1} H _{2.9} MgZr (PO ₄) ₃ " <i>Ceram. Inter.</i> 35 (2009) 2719-2725.
10	V Rama Devi, B Vijaya Kumar, Radha Velchuri, Palla Suresh, G Ravi' M Vithal, "Effect of Crystallite size on Electron Spin Resonance of Gd ³⁺ and Luminescence of Eu ³⁺ doped in La ₆ WO ₁₂ " <i>Indian J. Eng. Mater. Sci.</i> 19 (2012) 204-208.
9	Radha Velchuri, B. Vijaya Kumar , V. Rama Devi, G. Prasad, D. Jaya Prakash, M. Vithal "Preparation and Characterization of Rare Earth Orthoborates, LnBO ₃ (Ln = Tb, La, Pr, Nd, Sm, Eu, Gd, Dy, Y) & LaBO ₃ : Gd, Tb, Eu by Metathesis Reaction: ESR of LaBO ₃ : Gd and Luminescence of LaBO ₃ : Tb, Eu", <i>Mater. Res. Bull.</i> 46 (2011) 1219-1226
8	N. Anantharamulu, K. Koteswara Rao, G. Rambabu, B. Vijaya Kumar , Velchuri Radha, M. Vithal, "A wide-ranging review on Nasicon type materials" <i>J. Mater Sci.</i> 46 (2011) 2821-2837.
7	Radha Velchuri, B. Vijaya Kumar , V. Rama Devi, D. Jaya Prakash, M. Vithal "Solid-State Syntheses of Rare-Earth-Doped Sr _{1-x} Ln _{2x/3} MgP ₂ O ₇ (Ln = Gd, Eu, Dy, Sm, Pr, and Nd; x = 0.05) by Metathesis Reactions and their Spectroscopic Characterization" <i>Spectroscopy Letters</i> , 44 (2011) 258-266.
6	Radha Velchuri, B. Vijaya Kumar , V. Rama Devi, G. Prasad, M. Vithal, "Solid state metathesis synthesis of BaTiO ₃ , PbTiO ₃ , K _{0.5} Bi _{0.5} TiO ₃ and Na _{0.5} Bi _{0.5} TiO ₃ " <i>Ceram. Inter.</i> 36 (2010) 1485-1489.
5	Radha Velchuri, B. Vijaya Kumar , V. Rama Devi, Sang Il Seok, M. Vithal, "Low temperature preparation of NaTi ₂ (PO ₄) ₃ by sol-gel method" <i>Int. J. Nanotechnol.</i> , 7 (2010) 1077-1086.

4	V. Rama Devi, Radha Velchuri, B. Vijaya Kumar , K. Ravikumar, M. Vithal, “Low-temperature Sol-Gel Synthesis of bulk and nanosized NbTi(PO ₄) ₃ ”, <i>Synthesis and Reactivity in Inorganic Metal-Organic and Nano Metal Chemistry</i> 40 (2010) 883–887.
3	Radha Velchuri, B. Vijaya Kumar , V. Rama Devi, K. Ravi Kumar, G. Prasad, M. Vithal, “Low temperature preparation and characterization of In _{1-x} Ln _x BO ₃ (x = 0.0 and 0.05; Ln = Gd, Eu, Dy and Sm): ESR of In _{0.95} Gd _{0.05} BO ₃ and emission of In _{0.95} Eu _{0.05} BO ₃ ” <i>Spectrochimica Acta Part A</i> 74 (2009) 726–730.
2	N Anantharamulu, B Vijaya Kumar , V Rama Devi, T Sarojini, Ch Anjaneyulu, M Vithal, “Preparation and characterization studies of metaborates Cu _{1-x} M _x B ₂ O ₄ (M = Ni, Co and Mn; x = 0, 0.1 and 0.5)” <i>Bull. Mater. Sci.</i> , 32 , (2009) 1–10.
1	N. Anantharamulu, B. Vijaya Kumar , V. Rama Devi, M. Vithal, “Preparation, characterization and spectral studies of Cr _{1-x} Eu _x BO ₃ (x = 0, 0.01 and 0.05)” <i>Mater. Chem. Phys.</i> 108 (2008) 319–324.

16. Conferences/workshops/ seminars/Training Programs etc. attended.

Name of the Seminar attended	National/ International	Duration		Venue
		From	To	
National Conference on Physics and Chemistry of Materials	National	16-03-2023	18-03-2023	Govt. Holkar (Model Autonomous) Science College, Indore
International winter school 2022 on Frontiers in Materials Science	International	05-12-2022	09-12-2022	JNCASR, Bangalore
Current Trends and Futuristic Challenges in Chemical Sciences	International	29-07-2022	30-07-2022	Hyderabad
International conference on Emerging Trends in Spectroscopic Techniques and their Applications	International	03-12-2018	04-12-2018	Hyderabad
International Conference on "Drugs for the Future: Infectious Diseases	International	27-03-2014	28-03-2014	Hyderabad
Recent Advances in Chemical Research (NCRACR)	National	6-2-2009	7-2-2009	Hyderabad
Recent trends in Nanostructured Materials and their Applications (ICRNM)	International	19-12-2008	20-12-2008	Hyderabad
Nano, Bio and Materials Sciences (ICONBMS-2014)	International	08-1-2014	10-01-2014	Hyderabad
Chemistry and Physics of Materials	International	30-11-2009	5-12-2009	Bangalore
Academia-Industry Interface	National	06-08-2014	06-08-2014	Hyderabad
Materials For Energy Enabling Technologies	National	30-08-2008	30-08-2008	Hyderabad

New Dimensions in Chemical Sciences	National	30-01-2010	30-01-2010	Hyderabad
Teaching and Learning for Excellence	National	17-07-2012	19-07-2012	Warangal
Computational Drug Design	National	3-4-2014	04-04-2014	Hyderabad

Signature