

## FACULTY PROFILE



- 1) Name : Dr.-Ing. V. V. S. S. Srikanth
- 2) Designation : Associate Professor
- 3) Educational Qualifications : M.Sc., M.Tech., Ph.D.
- 4) Date of Birth : 01/05/1979
- 5) Department/Centre/School : School of Engineering Sciences and Technology
- 6) Area(s) of Research : Surface and Interface Engineering  
Nano Science and Technology
- 7) E-mail id : vvsssse@uohyd.ernet.in  
vvsssse@gmail.com
- 8) Phone No. : +91 40 2313 4453
- 9) Mobile No. (Optional) : +91 9676495222
- 10) **Total No. of M.Tech.s Guided : 15**
- 11) Details of M.Tech.s Guiding currently: -

12) **Total No. of Ph.D.s Guided: 6**

13) **Details of Ph.D.s Guiding currently:**

Sl. No.	Reg. No.	Name of the Candidate	Topic of Research	Status
1	09ETMM04	Harish Ojha	Bio-applications of novel nanomaterials	Submitted
2	10ENPT05	P. Sampath Kumar	Graphene based materials for supercapacitor and Li-ion battery applications	Submitted
3	11ENPT06	J. Ramakrishna	Dielectric behavior of metal oxide decorated graphene nanocomposites	Submitted
4	11ENPT09	M. Sandeep Kumar	Novel graphene composites for energy applications	Submitted
5	11ENPT01	N. Charanadhar	Fabrication of solar cells based on unique nano carbons	Ongoing
6	12ENPH01	K. V. Sreenivasulu	Magnetism in unique graphene based materials	Ongoing
7	12ENPH04	B. Varalakshmi	Surface modification of diamond and related materials	Ongoing
8	12ETMM09	R. Aneela	Thermodynamic calculations of gas and solid phases	Ongoing
9	12ENPT01	Hussen Maseed	Graphene based materials for energy and sensing applications	Ongoing
10	15ETPM01	J. Sravani	Magnetic nanocomposites and SERS applications of nanoclusters	Ongoing
11	13ETPM01	K. Venkateswarlu	Development of unique nanomaterials	Ongoing

14) **Subjects Teaching Currently:**

Sl. No.	Programme	I/III/V Semesters	II/V/VI Semesters
1	M.Tech. (Materials Engineering)	I (Introduction to Nano Science and Technology)	II (Surface Engineering)
2	Ph.D. (Materials Engineering)	I (Research Methodology and Introduction to Nano Science and Technology)	II (Surface Engineering)
3	Foundation Course (Open to all Students of the University)	I (Concepts of Nanoscience and Technology)	-

15) Research Papers/Books Published/Edited during 2015-16 & 2016-17 Academic Years:

Sl. No.	Title of the paper	Name of the Journal	Co-author(s), if any
1	Unique reduced graphene oxide as efficient anode material in Li ion battery	Bulletin of Materials Science	S. K. Puttapati, V. Gedela, M. V. Reddy, S. Adams, B. V. R. Chowdari
2	One-step synthesis of bulk quantities of graphene from graphite by femtosecond laser ablation under ambient conditions	Philosophical Magazine Letters	G. R. Kiran, B. Chandu, Swati G. Acharyya, S. Venugopal Rao,
3	In vitro and in vivo evaluation of anti-cancer activity: Shape-dependent properties of TiO <sub>2</sub> nanostructures	Materials Science and Engineering C	T. S. Latha, M. C. Reddy, S. V. Muthukonda, D. Lomada
4	Experimental elucidation of graphenothermal reduction mechanism of Fe <sub>2</sub> O <sub>3</sub> : An enhanced anodic behavior of exfoliated reduced graphene oxide/Fe <sub>3</sub> O <sub>4</sub> composite in Li-ion batteries	The Journal of Physical Chemistry C	Shaikshavali Petnikota, Hussien Maseed, M. V. Reddy, S. Adams, Madhavi Srinivasan, B. V. R. Chowdari
5	Ni nanoparticles prepared by simple chemical method for the synthesis of Ni/NiO-multi-layered graphene by chemical vapor deposition	Solid State Sciences	Mokhtar Ali, Nagarjuna Remalli, Venkataramana Gedela, Balaji Padya , Pawan Kumar Jain, Ahmed Al-Fatesh, Usman Ali Rana
6	Ultra-sensitive phenol sensor based on overcoming surface fouling of reduced graphene oxide-zinc oxide composite electrode	Journal of Electroanalytical Chemistry	Rinky Sha, P. Sampath Kumar, Sushmee Badhulika
7	Non-collinear ferromagnetic short range order in MgO decked multi-layered graphene	Physical Chemistry Chemical Physics	K. V. Sreenivasulu, N. K. Rotte, S. N. Kaul

8	Phoenix dactylifera mediated green synthesis of Cu <sub>2</sub> O particles for Arsenite uptake from water	Science and Technology of Advanced Materials	Mokhtar Ali, Nitin K. Labhsetwar, Ahmed S. Al- Fatesh, Hamid Shaikh
9	Pt-free spray coated reduced graphene oxide counter electrodes for dye sensitized solar cells	Solar Energy	C. Nagavolu, K. Susmitha, M. Raghavender, L. Giribabu, B. S. R. Kota, C. T. G. Smith, C. A. Mills, S. R. P. Silva
10	ZnO nanoparticles' decorated reduced-graphene oxide: Easy Synthesis, unique polarization behavior, and ionic conductivity	Materials & Design	Rama Krishna Jammula, Binoy Krishna Hazra, S. Srinath
11	Simple combustion synthesis of MgO and NiO decorated graphenaceous composite	Materials Letters	Naresh Kumar Rotte, Nagarjuna Remalli
12	Fascinating magnetic energy storage nanomaterials: A brief review	Recent Patents on Nanotechnology	K. V. Sreenivasulu
13	Co <sub>2</sub> Mo <sub>3</sub> O <sub>8</sub> /reduced graphene oxide composite: Synthesis, characterization, and its role as a prospective anode material in lithium ion batteries	RSC Advances	Sandeep Kumar Marka, Shaikshavali Petnikota, M. V. Reddy, Stefan Adams, B. V. R. Chowdari,
14	Wearable temperature sensor and infrared photodetector based on flexible polyimide substrate	Flexible and Printed Electronics	Parikshit Sahatiya, Sampath Kumar Puttapati, Sushmee Badhulika
15	Dragon's blood aided synthesis of Ag/Ag <sub>2</sub> O core/shell nanostructures and Ag/Ag <sub>2</sub> O decked multi-layered graphene for efficient As(III) uptake from water and antibacterial activity	RSC Advances	Mokhtar Ali, Ahmed Abu-Taleb, Nagarjuna Remalli, Maaged Abdullah, Nitin K. Labhsetwar,
16	Exfoliated graphene oxide/MoO <sub>2</sub> composites as anode materials in Li ion	ACS Applied Materials & Interfaces	Shaikshavali Petnikota, Keefe Wayne Teo, Luo Chen, Amos Sim, Sandeep

	batteries: An insight into intercalation of Li and conversion mechanism of MoO <sub>2</sub>		Kumar Marka, M. V. Reddy, S. Adams, B.V.R. Chowdari
17	Influence of Si Ion Implantation on Structure and Morphology of g-C <sub>3</sub> N <sub>4</sub>	Nuclear Instruments and Methods in Physics Research	B. Varalakshmi, K. V. Sreenivasulu, K. Asokan
18	Luminescence and high temperature ferromagnetism in YAIO nanophosphors: Materials for efficient next generation LEDs and spintronic applications	RSC Advances	K. Jayanthi, M. Mohan Rao, L. Satyanarayana, M. Manivel Raja, K. Mohan Kumar
19	Perspectives on state-of-the-art carbon nanotube/polyaniline and graphene/polyaniline composites for hybrid supercapacitor electrodes	Journal of Nanoscience and Nanotechnology	G. Venkata Ramana, P. Sampath Kumar
20	Sustainable graphenothermal reduction chemistry to obtain MnO nanonetworks supported exfoliated graphene oxide composite and its electrochemical characteristics	ACS Sustainable Chemistry and Engineering	Shaikshavali Petnikota, Nithyadharseni, M. V. Reddy, S. Adams, B. V. R. Chowdari
21	Picosecond laser induced fragmentation of coarse Cu <sub>2</sub> O particles into nanoparticles in liquid media	Applied Surface Science	Mokhtar Ali, Nagarjuna Remalli, Fahem Yehya, Anil Kumar Chaudhary
22	Dielectric properties of novel composites prepared with few layered graphene (FLG)-lithium triniobate (LiNb <sub>3</sub> O <sub>8</sub> )	AIP Conference Proceedings	Anil Tumuluri, Sandeep K Marka, K. C. James
23	Elucidation of few layered graphene-complex metal oxide (A <sub>2</sub> Mo <sub>3</sub> O <sub>8</sub> , A= Co, Mn	Electrochimica Acta	Shaikshavali Petnikota, Sandeep K Marka, M. V. Reddy, B. V. R. Chowdari,

	<b>and Zn) composites as robust anode materials in Li ion batteries</b>		
<b>24</b>	<b>A brief notes on metal oxide-carbon nanomaterial-polypyrrole/polyaniline ternary nanocomposites as hybrid type supercapacitor electrode materials</b>	<b>Nanoscience and Nanotechnology Asia</b>	<b>P. Sampath Kumar</b>
<b>25</b>	<b>Graphene and graphene/binary transition metal oxide composites as anode material for Li-ion batteries</b>	<b>Nanoscience and Nanotechnology Asia</b>	<b>Sandeep K Marka</b>
<b>26</b>	<b>Strong interfacial polarization in ZnO decorated reduced-graphene oxide synthesized by molecular level mixing</b>	<b>Physical Chemistry Chemical Physics</b>	<b>Rama Krishna Jammula, Suresh Pittala, S. Srinath</b>
<b>27</b>	<b>Graphenothermal reduction synthesis of 'exfoliated graphene oxide/iron (II) oxide' composite for anode application in lithium ion batteries</b>	<b>Journal of Power Sources</b>	<b>Shaikshavali Petnikota, Sandeep K Marka, Arkaprabha Banerjee, M. V. Reddy, B. V. R. Chowdari</b>
<b>28</b>	<b>Flexible few-layered graphene/poly vinyl alcohol composite sheets: synthesis, characterization and EMI shielding in X-band through absorption mechanism</b>	<b>RSC Advances</b>	<b>Sandeep K Marka, Bashaiah Sindam, K. C. James Raju</b>
<b>29</b>	<b>Growth of MgO on multi-layered graphene and Mg in PVA matrix</b>	<b>Superlattices and Microstructures</b>	<b>Sandeep K Marka, Md. Ahamad Mohiddon, Durga P Muvva,</b>
<b>30</b>	<b>A unique solar radiation exfoliated reduced graphene oxide/polyaniline nanofibers composite</b>	<b>Materials Letters</b>	<b>G. Venkataramana, P. Sampath Kumar, N. Charanadhar</b>

	<b>electrode for supercapacitors</b>		
<b>31</b>	<b>Crystalline ZnO/amorphous ZnO core/shell nanorods: self-organized growth, structure and novel luminescence</b>	<b>The Journal of Physical Chemistry C</b>	<b>I. Saikumar, M. Sandeep Kumar, Rajani K. Vijayaraghavan, End McGlynn, Jean-Paul Mosnier</b>
<b>32</b>	<b>SERS activity of Ag decorated nanodiamond and nano-<math>\beta</math>-SiC, diamond-like-carbon and thermally annealed diamond thin film surfaces</b>	<b>Physical Chemistry Chemical Physics</b>	<b>K. Mohan Kumar, R. Satyavathi, G. Upender, Harish Ojha, D. Narayana Rao, C. Bansal</b>
<b>33</b>	<b>MgO decorated few-layered graphene as an anode for Li ion batteries</b>	<b>ACS Applied Materials and Interfaces</b>	<b>Shaikshavali Petnikota, N. K. Rotte, M. V. Reddy, B. V. R. Chowdari</b>
<b>34</b>	<b>Influence of applied pressure during field-assisted sintering of Ti(C,N) WC-FeAl based nanocomposite</b>	<b>Ceramics International</b>	<b>M. S. Archana, S. V. Joshi, J. Joardar</b>
<b>35</b>	<b>Electrochemically active polyaniline (PANi) coated carbon nanopipes and PANi nanofibers containing composite</b>	<b>Journal of Nanoscience and Nanotechnology</b>	<b>G. Venkata Ramana, P. Sampath Kumar, Balaji Padya, P. K. Jain,</b>
<b>36</b>	<b>Carbon- and polyaniline-nanofibers containing composite electrode material for supercapacitors</b>	<b>Journal of Nanoscience and Nanotechnology</b>	<b>G. Venkata Ramana, Mokhtar Ali</b>

16) Ongoing Research/Consultancy Projects:

Sl. No.	Name of the Project	Sponsoring Agency	Budget	Expected year of completion
<b>1</b>	<b>The Energy Cube of the Future</b>	<b>DST-UKIERI</b>	<b>₹19,40,080/-</b>	<b>2017</b>
<b>2</b>	<b>Development of non-invasive medical diagnostic methods with nanocluster deposited films as active substrates for Surface Enhanced Raman Spectroscopy</b>	<b>DST-SERB</b>	<b>₹78,00,000/-</b>	<b>2020</b>

17)	Details of development of E-learning content:
18)	Details of Patents (if applicable):
19)	Academy Fellowships/Prestigious awards (if applicable):
	<ul style="list-style-type: none"> <li>• <b>Young Engineer Award 2012 for contributions in the area of carbon nanomaterials in India, Indian National Academy of Engineering (INAE)</b></li> <li>• <b>Inducted as Young Associate, Indian National Academy of Engineering (INAE)</b></li> <li>• <b>Chancellor's Award 2016, University of Hyderabad for contributions in teaching and research</b></li> </ul>
20)	Corporate Responsibilities holding currently:
21)	Outreach/Extension activities:
	<ul style="list-style-type: none"> <li>• <b>Invitee (as an expert on Materials for high temperature sensors), Indo-US Workshop on Integrated Vehicle Health Management (IVHM) and Aviation Safety – WIAS, Bengaluru, India, 9-10<sup>th</sup> January, 2012.</b></li> <li>• <b>Invitee (as an expert on High Temperature Coatings), Coordinated programme on high temperature materials organized by AR&amp;DB of DRDO, Bengaluru, India, April 27<sup>th</sup>, 2012.</b></li> <li>• <b>Member, Board of Studies, Materials Science and Nano Technology, Jawaharlal Nehru Technological University, Hyderabad, India, 2012.</b></li> <li>• <b>Member, Board of Studies, PG Diploma Course in Nanotechnology, Jawaharlal Nehru Technological University, Hyderabad, India.</b></li> <li>• <b>Invitee, Coordinated programme on High temperature Coatings, Turbine Blades Initiative, AR&amp;DB of DRDO, Organized at IISc, Bengaluru, India, October 4<sup>th</sup>, 2012.</b></li> <li>• <b>External Expert for evaluation of M.Sc., M.Tech and M.Phil theses JNTU, Hyderabad.</b></li> <li>• <b>External Expert for PhD (Nanotechnology) admission, JNTU, Hyderabad</b></li> <li>• <b>Member, Board of Studies, Materials Science and Nano Technology, UG and PG courses, Jawaharlal Nehru Technological University, Hyderabad, India, 2013.</b></li> <li>• <b>Expert member, Recruitment, ARCI, Hyderabad 2013.</b></li> <li>• <b>Special Invitee, 1<sup>st</sup> Engineers Conclave 2013, New Delhi, Sep 2013.</b></li> <li>• <b>Member, Board of Studies, Biotechnology Engineering, UG and PG courses, Jawaharlal Nehru Technological University, Ananthapur, JNTUA College of Engineering, Pulivendula India, 2013.</b></li> </ul>



- **Member: Board of Studies, PG courses in Nanotechnology, JNTU Hyderabad**
- **Member: Board of Studies, M.Tech. (Nano Technology), Andhra University**
- **External Expert (General): JNTU Hyderabad**
- **Member: Indian Carbon Society**
- **Member: Materials Research Society of India**
- **Member: Indian Institute of Metals**
- **Member: Electron Microscope Society of India**
- **Member: American Carbon Society**
- **Member: Royal Society of Chemistry**
- **Member: American Chemical Society**
- **Professional Member: International Solar Energy Society**
- **Special Invitee, 3<sup>rd</sup> Engineers Conclave 2015, Mumbai, Sep 2015.**
- **Editor: Materials Today: Proceedings 2(9), Part A, Pages 4309-4646 (2015)**
- **Expert member, Recruitment, ARCI, Hyderabad 2016.**
- **Special Invitee, 4<sup>th</sup> Engineers Conclave 2016, Chennai, Sep 2016.**
- **Expert member, Recruitment, ARCI, Hyderabad 2017.**
- **Member: Expert Committee (constituted by The State Project Advisor & Commissioner of Technical Education, Andhra Pradesh Government) to Review the TEQIP-II Centre of Excellence at Andhra University College of Engineering, Visakhapatnam**
- **External Expert (General): JNTU Hyderabad**
- **Member – Board of Studies, Centre for Nanotechnology, AU College of Engineering, Visakhapatnam, Andhra Pradesh**
- **Member – Board of Studies, Nanotechnology, JNTUH, Hyderabad, Telangana**
- **Recognized Reviewer for the following International Peer Reviewed Journals (only 2016–17):**
  - Materials Letters (Elsevier)*
  - Transactions of the Indian Institute of Metals (Springer)*
  - Journal of Energy Storage (Elsevier)*
  - European Polymer Journal (Elsevier)*
  - Physical Chemistry Chemical Physics (Royal Society of Chemistry)*
  - Bulletin of Materials Science (Springer)*
  - Diamond and Related Materials (Elsevier)*
  - Journal of Physical Chemistry (American Chemical Society)*
  - Plasmonics (Springer)*
  - CLEAN - Soil, Air, Water (Wiley)*
  - Journal of Hazardous Materials (Elsevier)*
  - Chemical Engineering Journal (Elsevier)*
  - Nanoscale (Royal Society of Chemistry)*
  - eXPRESS Polymer Letters (Budapest University of Technology and Economics)*
  - Journal of Physical Science (Penerbit Universiti Sains Malaysi)*
  - Materials Chemistry and Physics (Elsevier)*
  - ACS Omega (American Chemical Society)*
  - ACS Applied Materials & Interfaces (American Chemical Society)*
  - Materials Science & Engineering C (Elsevier)*

	<p><i>Materials &amp; Design (Elsevier)</i>  <i>Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry (Taylor &amp; Francis)</i>  <i>Applied Surface Science (Elsevier)</i>  <i>Polymer-Plastics Technology and Engineering (Taylor &amp; Francis)</i>  <i>Scientific Reports (Nature Publishing Group)</i>  <i>ACS Sustainable Chemistry &amp; Engineering (American Chemical Society)</i>  <i>Materials Express (American Scientific Publisher)</i>  <i>Journal of Environmental Management (Elsevier)</i>  <i>Journal of Alloys and Compounds (Elsevier)</i>  <i>Green Chemistry (Royal Society of Chemistry)</i>  <i>Polymer Composites (Wiley)</i>  <i>Advances in Nanoparticles (Scientific Research Publishing)</i></p>
22)	Major research achievements (Maximum 150 words):
	<ul style="list-style-type: none"> <li>• <b>Development of diamond like carbon, diamond, SiC, and diamond/<math>\beta</math>-SiC nanocomposite thin films for cutting tool and bio-sensing applications</b></li> <li>• <b>Development of carbon nanomaterials (tubes, bells pipes, fibers, and graphene) and their composites for energy storage</b></li> <li>• <b>Development of other nanomaterials (especially oxides) for environmental and bio-applications and iv) extremely easy materials' processing procedures which are industrially viable</b></li> <li>• <b>Introduction of a solid state processing technique named grapheno-thermal reduction process for scalable production various of graphene/metal oxide nanocomposites for Li ion battery, supercapacitor and other energy storage device applications</b></li> <li>• <b>Demonstration of direct LASER writing (micromachining) on hard thin films like Diamond and SiC</b></li> <li>• <b>Demonstration of the use of solar radiation, microwave (household microwave oven) and Xe lamp to process graphene</b></li> <li>• <b>Demonstration of reusable carbon based substrates (without metal deposition) for bio-sensing based on SERS</b></li> <li>• <b>Development of nanomaterials (graphene based) for plasmid DNA, genomic DNA and RNA purification and for anti-cancer activity</b></li> <li>• <b>Development of thin films for bio-sensing based on SERS Processing various nano metal oxides through green techniques and use the metal oxide powders in removing heavy metal (As, Se etc.,) contaminations from water</b></li> </ul>
23)	Any other significant achievements:
	<a href="http://www.vvsssrikanth.in">www.vvsssrikanth.in</a>
24)	Date last updated: 24/09/2017