

Faculty Profile

- 1.Name of the Faculty : Dr. V. SURESH KUMAR
- 2.Department and Designation : Physics, Visiting Faculty
- 3.Date of Joining : 22.07.2013
- 4.Faculty ID : 8100145
5. E-mail Address : sureshkumarcgc@gmail.com
6. Date of Birth : 28.07.1977
7. Qualification : M.Sc., M.Phil., Ph.D.



Degree	Branch	Institute/University	Year of Passing	Percentage of Marks/CGPA
Ph.D	Physics	Anna University, Chennai.	2008	Commended by the Examiners
M.Phil	Physics	Anna University, Chennai.	2003	7.78 out of 10
M.Sc	Physics	Bharathiar University Coimbatore	2001	64.166

8. Specialization : Solid State Physics

9. Professional Experience:

Position held	Institution	From	To	Nature of the work
Visiting Faculty	University College of Engineering Anna University (BIT campus) Tiruchirappalli	22.7.2013	Continue	Teaching and Research
Postdoctoral Fellow	Institute for Materials Research Tohoku University Sendai City Japan	08.01.2009	31.03.2012	<u>Research</u> Growth and Characterisation of Nitride Semiconductors by MOCVD technique

Junior Research Fellow	Crystal Growth Centre Anna University Chennai	01.04.2016	31.12.2008	Research
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10. Research Guidance : Nil

11. Awards and Honors :

ICTP-TRIL Fellow	Institute of Materials for Electronics and Magnetism Parma, Italy	09.07.2006	22.08.2006	Research
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12. Sponsored Projects : Nil

13. Patents : Nil

14. Publications

(i) Internationally Refereed Journals: (along with Impact Factor)

1. M. Senthil Kumar, **V. Suresh Kumar**, K. Asokan, J.C. Jan, W.F. Pong and J. Kumar J, 'X-ray absorption spectroscopic study on Ti/n-GaN', Phys. Stat. Sol(a), Vol. 202, pp. R161-R163, (2005). Impact factor:
2. Vipul Srivastava, **V. Suresh Kumar**, P. Puviarasu, K. Thankaraju, R. Thangavel and J. Kumar, 'Growth and characterisation of gallium nitride nanowire', J. Crys. Growth, Vol. 275, pp. 2367-2369, (2005). Impact factor: 1.752
3. **V. Suresh Kumar**, P. Puviarasu, K. Thangaraju, R. Thangavel, V. Baranval, F. Singh, T. Mohanty, D. Kanjilal, K. Asokan, and J. Kumar, 'Effect of swift heavy ions of Silver and Oxygen on GaN' Nucl. Instrum. and Meths B, Vol. 244 (2006) pp. 145-148. Impact factor: 1.324
4. **V. Suresh Kumar**, M. Senthil Kumar, J. Kumar, T. Mohanty, D. Kanjilal, K. Asokan, A. Tripathi, and P.K. Kulriya, 'Investigations on the influence of 100 MeV O⁷⁺ ions irradiation on the structural and optical properties of GaN epilayers', Radiation Effects and Defects in Solids, Vol. 162 (2007) pp. 229-236. Impact factor: 0.502
5. **V. Suresh Kumar**, M. Senthil Kumar, P. Puviarasu, J. Kumar, T. Mohanty, D. Kanjilal, K. Asokan, A. Tripathi, M. Fontana, and A. Camarani, 'Investigations of 100 MeV Au⁷⁺ ions irradiation on GaN', Semicon. Sci. and Tech., Vol. 22 (2007) pp. 511-516. Impact factor: 2.206

6. **V. Suresh Kumar**, R. Kesavamoorthy, and J. Kumar, 'Growth and characterisation of manganese doped gallium nitride nanowires', *J. Nanosci. and nanotech.*, Vol. 8 (2008) pp. 4243 – 4246. Impact factor: 2.101
7. **V. Suresh Kumar**, and J. Kumar, 'Growth, surface morphology and optical properties of GaN nanowires', *Adv. Mater. Res.*, Vol. 31 (2008) pp. 42-52.
8. **V. Suresh Kumar**, J. Kumar, R.K. Srivastava, A. Srivastava, and O.N. Srivastava, 'Growth and characterisation of GaN nanocrystals on carbon nanotubes', *J. Cryst. Growth*, Vol. 310 (2008) pp. 2260-2263. Impact factor: 1.752
9. **V. Suresh Kumar**, J. Kumar, D. Kanjilal, K. Asokan, T. Mohanty, A. Tripathi, F. Rossi, A. Zappettini, L. Lazzarani, and C. Ferrari, 'Investigations on 40 MeV Li³⁺ ions irradiated GaN epilayers', *Nucl. Instrum. Meths. B*, Vol. 266 (2008) pp. 1799-1803. Impact factor: 1.324
10. P. Puviasaru, **V. Suresh Kumar**, D. Kanjilal, K. Asokan, and J. Kumar, 'Investigations on 100 MeV Ni 9+ ions irradiation effects on Cl-VPE grown GaN epilayers', *Nucl. Instrum Meths. B*, Vol. 267 (2009), 79-82. Impact factor: 1.324 (Cited by 4)
11. **V. Suresh Kumar**, J. Kumar, P. Puviasaru, S. Munawar Basha, and K. Asokan, 'Effect of 100 MeV Ni ion irradiation on MOCVD grown n-GaN', *Physica B*, Vol. 406 (2011) 4210 - 4213. Impact factor: 1.133.
12. J. H. Choi, **V. Suresh Kumar**, S.Y. Ji, K. Shojiki, T. Hanada, R. Katayama, and T. Matsuoka, 'Effect of Nitridation on Indium composition of InGaN films', *Key Engineering Materials*, 508 (2012) 193.
13. Yuantao Zhang, Takeshi Kimura, Kiattiwut Prasertusk, Takuya Iwabuchi, **Suresh Kumar**, Yuhuai Liu, Ryuji Katayama, Takashi Matsuoka, 'Optical properties of InN films grown by Pressurized-reactor metalorganic vapour phase epitaxy', *Thin Solid Films*, 536 (2013) 152. Impact factor: 2.038

(ii) National Journals: Nil

(iii) International Conferences

1. **V. Suresh Kumar**, P. Puviasaru, K. Thangaraju, R. Thangavel, and J. Kumar, "Effect of swift heavy ions of silver and oxygen on GaN and Au, Ni and Mn deposited GaN", Indo-German workshop – Synthesis and modification of Nanostructured materials by energetic ion beams, Nuclear Science Centre, New Delhi, February 20-24, 2005.
2. **V. Suresh Kumar**, and J. Kumar, "Synthesis and characterization of Mn doped GaN as a useful DMS material", 13th International Workshop on Physics of Semiconductor Devices, National Physical Laboratory, New Delhi, December 13-17, 2005.
3. **V. Suresh Kumar**, M. Senthil Kumar, T. Mohanty, A. Tripathi, D. Kanjilal, K. Asokan. P.K. Kulyria, and J. Kumar, "Investigations on the influence of 100 MeV O⁷⁺ ions irradiation on the structural, surface morphology and optical properties of GaN

- epilayers”, International workshop on Ion beam studies of nanomaterials-synthesis, modification and characterisation, ICTP, Trieste, Italy, 26 June-01 July, 2006.
4. **V. Suresh Kumar**, and J. Kumar, “Growth and characterisation of manganese doped GaN nanowires”, College on Physics of Nanodevices, ICTP, Trieste, Italy, July 11-22, 2006.
 5. **V. Suresh Kumar**, and J. Kumar, “Structural and optical properties on Gallium nitride nanowires”, International Conference on Advances in Material Processing and Characterisation, Dept. of Mechanical Engg., Anna University, Chennai, August 28-30, 2006.
 6. **V. Suresh Kumar**, J. Kumar, and R. Kesavamoorthy, “Growth and characterisation of manganese doped GaN nano wires”, International Conference on Advanced Nanomaterials, Indian Institute of Technology, Bombay, Mumbai, January 08-10, 2007.
 7. **V. Suresh Kumar**, and J. Kumar, “Growth, surface morphology and optical properties of GaN nanowires”, International Conference on Materials for Advanced Technologies, Singapore, July 1-6, 2007.
 8. V. Suresh Kumar, J. Kumar, D. Kanjilal, K. Asokan, and M. Fontana, “Investigations on 40 MeV Li³⁺ ions irradiation effects on Gallium nitride epilayers”, 18th International Conference on Ion Beam Analysis, University of Hyderabad, Hyderabad, September 23-28, 2007.
 9. S.Y.Ji, K. Hobo, Y.H. Liu, Y.T. Zhang M. Wakaba, K. Kimura, **V. Suresh Kumar**, T. Hanada, T. Matsuoka, “Epitaxial Growth of GaN on ZnO substrates” 4th International Symposium on Medical, Bio- and Nano-electronics, Page No. 163-164, Sendai Excel Hotel Tokyu, Sendai, Japan, March 5-6, 2009.
 10. Shi-Yang Ji, Yuhuai Liu, Yuantao Zhang, **V. Suresh Kumar** and Takashi Matsuoka, “MOVPE growth of Gallium Nitride Layer on ZnO substrate”, 2009 Asian Core Workshop on Wide Bandgap Semiconductors”, Taikanso, Matsushima, Miyagi, Japan, September 4-5, 2009.
 11. Shi-Yang Ji, Kenji Hobo, Yu-Huai Liu, Yuan-Tao Zhang, **Venkatachalam Suresh Kumar** and Takashi Matsuoka, “MOVPE Growth of GaN on Novel Substrate:ZnO” The 8th International Conference on Nitride Semiconductors, ICC Jeju, Korea, October 18-23, 2009.
 12. S.Y. Ji, Y.H. Liu, **V. Suresh Kumar**, Y.T. Zhang, K. Kimura and T. Matsuoka, “MOVPE Growth of InGaN on ZnO substrate” Asia-Core Workshop on Wide Bandgap Semiconductors” Gyeongju, Korea, 23-25, October 2009.
 13. **V. Suresh Kumar**, S.Y. Ji, Y.H. Liu, K. Hobo, H.Shindo and T. Matsuoka, “ Influence of the V/III ratio on surface morphologies and optical properties of MOVPE grown InGaN epitaxial layers., 5th International Symposium on Medical, Bio- and Nano-electronics, Page No. 245-246, Sendai Excel hotel Tokyu, Sendai, Japan, February 24&25, 2010.

14. Shiyang Ji, **Venkatachalam Suresh Kumar** Yuhuai Liu, Yuantao Zhang, Takeshi Kimura, Kenji Hobo, Takashi Matsuoka, “Progresses in GaN growth on ZnO substrates”, 5th International Symposium on Medical, Bio- and Nano-electronics, Page No. 245-246, Sendai Excel hotel Tokyu, Sendai, Japan, February 24&25, 2010.
15. **V. Suresh Kumar**, S.Y. Ji, Y.H. Liu, K. Hobo, H.Shindo and T. Matsuoka, “Influence of the V/III ratio on MOVPE growth of InGaN layers., Japan Society of Applied Sciences, Tokai University, Kanagawa, Japan, March 17 - 20, 2010.
16. S.Y. Ji, K. Hobo, Y.H. Liu, **V. Suresh Kumar**, Y.T. Zhang, H. Shindo, R. Katayama, T.Matsuoka, “Effects of GaN template on movpe growth of InGaN epilayers”, Japan Society of Applied Sciences. Tokai University, Kanagawa, Japan, March 17 - 20, 2010.

(iv) National Conferences

1. J. Kumar, **V. Suresh Kumar**, V.N. Mani, and S. Sundar Manoharan, “On the effect on Transition metal doping in Gallium nitride for use as dilute magnetic Semiconductor”, National Conference on Advanced Materials and Technology, DAV College, Amritsar, September 24 – 26, 2004.
2. **V. Suresh Kumar**, J. Kumar, D. Kanjilal, and K. Asokan, “Investigations on 40 MeV Li³⁺ ions irradiation effects on MOCVD grown GaN”, 36th National Seminar on Crystallography, University of Madras, Guindy Campus, Chennai, January 22-24, 2007.
3. **V. Suresh Kumar**, S.Y. Ji, Y.T. Zhang, K. Shojiki, R. Katayama, T. Matsuoka “MOVPE growth and Characteristics of Nitride Semiconductors, National Conference on Advances in Applied Chemical Sciences and Materials Technology (ACSMT 2014) Organised by Department of Chemistry, Bharathidasan Institute of Technology, Anna University Tiruchirappalli – 620024. (ISBN:978-93-81521-46-5)
4. A.J. Heiner and **V. Suresh Kumar** “A study of LPG sensor using nono-structured polypyrrole composite as a sensing material, National conference on Physics of bulk and nano materials & devices (P-BAND’15) organised by the department of physics, Anna University, BIT campus, Trichy during 19& 20, March 2015. (**WON FIRST PLACE IN POSTER PRESENTATION**).

(v) Books Published with ISBN number/ISSN number: Nil

14. CONFERENCES/WORKSHOPS/SEMINAR/ SHORT TERM REFRESHER COURSE ATTENDED

INTERNATIONAL

1. Indo-Japan Workshop On Crystal Growth and Applications of Advanced Materials for Optoelectronics held at Crystal Growth Centre, Anna University, Chennai from December 7-10, 2004.

2. International Workshop on Crystal Growth & Characterisation of Advanced Materials held at Crystal Growth Centre, Anna University, Chennai from January 9 – 13, 2006.
3. International Workshop on Nanoscience and Technology held at Dept. Of Physics, College of Engineering, Anna University, Chennai during 13-17, February 2006.
4. International Workshop on Crystal Growth and Characterization of Advanced Optical Materials held at Crystal Growth Centre, Anna University, Chennai during December 18 – 21, 2012.
5. International Workshop on Electronic Materials Technology held at Crystal Growth Centre, Anna University Chennai during March 13-15, 2014.

NATIONAL

1. Workshop on Radiation Detectors, held at Nuclear Science Centre, New Delhi on March 14, 2003.
2. Workshop on Research with Low Energy Accelerators held at Institute of Physics, Bhubaneswar from February 26-27, 2004.
3. Awareness Programme on Applications of Radioisotopes and Radiation Technology for Societal Development (ARRTS – 2004) held at Anna University, Chennai from July 13 – 14, 2004.
4. Seminar cum Workshop on Materials Characterisation and Surface Modification in Research and Industry using Ion Accelerators (MCIA) held at BARC, Hyderabad from February 9 – 11, 2005.
5. Seminar on Energy Materials and Systems held at Crystal Growth Centre, Anna University during 10-11 January, 2008.
6. Workshop on Biomaterials and Biomineralisation held at Crystal Growth Centre, Anna University, Chennai on February 1, 2008.
7. Lecture Workshop on Chemistry for sustainable Green Environment (Ches – Green 16) held at Department of Chemistry, BIT Campus, Anna University, Tiruchirappalli – 600024 on March 11 & 12, 2016.
8. TEQIP II sponsored two day seminar on “Challenges and opportunities in Chemical and Environmental Research (Chemera 2016)” held at Department of Chemistry, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli during August 11 & 12, 2016.
9. TEQIP II sponsored two day seminar on “Recent advancements in Materials” (NSRAM 17) held at Department of Physics, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli during March 24 and 25, 2017.

Faculty Development Programme attended

1. A seven days **Faculty Development Programme** sponsored under TEQIP Phase II on Advances in Physics and Applied Research for Technologists (APART-2013) organized by the Department of Physics, Bharathidasan Institute of Technology, Anna University (BIT Campus) Tiruchirappalli from 29-11-2013 to 06-12-2013.
2. A Fourteen days **Faculty Development programme** “Advanced Research in Materials for Engineering and Technological applications (ARMETA-2015) organized by the Department of Physics, Bharathidasan Institute of Technology, Anna University (BIT Campus), Tiruchirappalli, from 17th – 30 July 2015.
3. A Fourteen days **Faculty Development programme** “Recent advancements in materials” (RAM -16) organized by the Department of Physics, Bharathidasan Institute of Technology, Anna University (BIT Campus), Tiruchirappalli, from 11th – 24 July 2016.

15. CONFERENCES/WORKSHOPS/SEMINAR ORGANISED: Nil

16. Other contribution (if any)

Responsibilities

1. **PG lab (M.Tech. Nanoscience and Technology) incharge**
2. **Department’s Quality improvement Cell coordinator**
3. **Department’s Cultural coordinator for students.**

Signature

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