

Faculty Profile of Dr. R. T. Rajendra Kumar



Dr. R. T. Rajendra Kumar

Professor

Department of Nanoscience and Technology

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Mobile No: +91 97897 57888

Research Area

- 2-D Nanomaterials
- Gas sensor
- Biosensor
- Energy Storage Devices

Education & Career

Education

Ph. D.,

Ph.D. (2003) - Physics, Bharathiar University, India

Subject : Physics

Institution : Bharathiar University, Coimbatore

Affiliated University : Bharathiar University

Year of Award : 2003

M. Sc.,

Subject: Physics

Institution : P.S.G. College of Arts and Science

Affiliated University : Bharathiar University

Year of Award : 1998

B. Sc.,

Subject: Physics

Institution: Chikkaiah Naicker College, Erode

Affiliated University: Bharathiar University

Year of Award: 1996

Career**At Bharathiar University (Reverse Order)**

Professor : August 2018 to Till Date

Associate Professor : August 2015 to August 2018

Assistant Professor : April 2005 to August 2015

Past Experience

Associate Professor, January 2013 to January 2015 at Department of Nanoscience and Technology, Bharathiar University, Coimbatore

Associate Professor, February 2012 to January 2013 at Department of Nanoscience and Technology, Bharathiar University, Coimbatore

Reader, February 2009 to February 2012 at Department of Physics, Bharathiar University, Coimbatore

Postdoctoral Researcher, Department of Micro and Nanotechnology, Technical University of Denmark (Jan.2007 - Jul.2008)

Postdoctoral Researcher, School of Physical Sciences, Dublin City University, Dublin, Ireland (May2005 - Dec.2006)

Postdoctoral Researcher, Atomic Physics Division, Stockholm University, Sweden (Apr.2003 - Mar.2005)

Awards

1.Purpose of Award : India Top Citation award - IOP Publishing

Year of Award : 2019

2.Purpose of Award : Fellow of Academy of Sciences

Year of Award : 2016

3.Nehru Group of Institutions

Country : India

Purpose of Award : Best Faculty Award

Year of Award : 2012

4.DAE- BRNS

Country : India

Purpose of Award : Young Scientist Research Award

Year of Award : 2012

5.Dublin City University

Country : Ireland

Purpose of Award : International Visiting award

Year of Award : 2010

Travel awards

Title of paper : NiZn Ferrite/Graphene oxide composites as effective As& Pb adsorbent from water'

Name of Award : International Conference on Nano for Energy and Water (NEW 2017)

Funding agency : RSC Sustainable Energy & Fuels

Country : India

Year of Award : 22nd – 24th February 2017

Title of paper : Optical and Magnetic Studies on Co doped ZnO Nanorods

Name of Award : Second International Conference on Nanomaterials: Synthesis, Characterisation and Applications (ICN 2012)

Funding agency : RSC Sustainable Energy & Fuels

Country : India

Year of Award : 12th to 15th January 2012

Title of paper : Morphology dependent Photocatalytic degradation of ZnO nanoparticles

Name of Award : 55th DAE Solid State Physics Symposium

Funding agency : DAE

Country : India

Year of Award : 26 to 30 Dec 2010

Title of paper : Effect of Substitution of Sn on the structural and magnetic properties of $\text{SmCo}_{6.8-x}\text{Sn}_x\text{Zr}_{0.2}$ nanostructured metastable alloys

Name of Award : National Conference on Recent Advances in Magnetic Materials and Applications (MAGMA 2010)

Funding agency : DAE

Country : India

Year of Award : 28th Jan 2010

Membership

Professional Bodies

1.American Chemical Society

Professional member

2.Society of Nanoscience and Nanotechnology

Professional member

3.Magnetic Society of India

Life member

4.Institute of Physics (IOP), London

Professional member

Visits

Collaborators

Others

Projects

Funded Projects(National Level)

- [Ongoing - 01](#)
 - [Completed - 03](#)
-

Title of the project : Fabrication of ZnO nanorods/polymer hetero-junction for solar cell application

Funding Agency : DST – NanoMission

Amount : Rs. 29,87,400.

Duration : 2011-2014

Title of the project : Investigation of interfacial charge transfer aspects of hybrid polymer/ZnO nanorod arrays as an initial step towards judging their potential for nano-light emitting devices NANOLED

Funding Agency : DST – Indo-Ireland Bilateral Project

Amount : Rs. 3,07,000.

Duration : 2011-2013

Title of the project : Influence of Swift Heavy Ion Irradiation on the structural and Magnetic Properties of Galfenol ($\text{Fe}_{1-x}\text{Ga}_x$) Thin Films

Funding Agency : UGC – IUAC

Amount : Rs. 6,03,000.

Duration : 2012-2015

Title of the project : Wetting control and electro-wetting properties of superhydrophobic Si nanostructures

Funding Agency : DAE- BRNS Young Scientist Research Award

Amount : Rs. 14,35,000.

Duration : 2012-2015

Title of the project : Synthesis and characterization of reduced graphene oxide for gas sensing applications

Funding Agency : DST – SERB Fast Track

Amount : Rs. 28,00,000.

Duration : 2012-2015

Title of the project : Development of carbon nanostructure-based nano-biosensors,

Funding Agency : DRDO Project,

Amount : Rs. 25,00,000/-

Duration : 2014-2017

Title of the project : Synthesis and characterization of Zinc ferrite / Titanosilicate nanocomposites for the removal of Cs and Sr,

Funding Agency : UGC – DAE-CSR

Amount : Rs. 1,35,000/-

Duration : 2017-2020

Title of the project : Development of sewer manhole sensors

Funding Agency : RUSA 2.0-BEICH

Amount : Rs.6,00,000/-

Duration : 5 MONTHS 2020

Title of the project : Metal Organic functionalised 2D MoS₂, WS₂ based electronic nose towards selective detection of disease related Volatile Organic Compounds

Funding Agency : DST-SERB

Amount : Rs. 39,00,000/-

Duration : 2018-2021

Title of the project : Swift Heavy Ion Irradiation effects on the texture, microstructural piezoelectric properties of reactive sputtered Aluminum Nitride thin films

Funding Agency : UGC-IUAC

Amount : Rs. 6,07,000/-

Duration : 2018-2021

Title of the project : Development of electronic nose nano sensor array for non-invasive detection of lung cancer from exhaled breath

Funding Agency : RUSA 2.0-BCTRC

Amount : Rs.7,88,000/-

Duration : 2020 - 2022

Consultancy Projects

- [Ongoing](#)
- [Completed](#)

Research Guidance

- [Post-Doc](#)
- [Ph.D.](#)
- [M.Phil.](#)
- [M.Sc.,](#)

ONGOING

1. M. Mathankumar ,RT Rajendra Kumar

2D Metal sulfide thin film-based nanosensor array for breath biomarker sensing
ongoing

2. K. Govindaraj ,RT Rajendra Kumar

Synthesis and ion irradiation effects of AlN thin films on piezoelectric and pressure sensing properties
ongoing

3. K. Muthumalai ,RT Rajendra Kumar

Wearable biosensors for human health monitoring applications
ongoing

4. K. Sabarish ,RT Rajendra Kumar

Metal oxide decorated Graphitic carbon nitride nanostructures for visible photocatalysts
ongoing

5. N. Gokila ,RT Rajendra Kumar

Development of an electrochemical biosensor for banana viruses detection
ongoing

AWARDED

1. Dr. K. Rajavel ,RT Rajendra Kumar

Synthesis and characterization of pure metal (Au and Ag) and metal oxide (ZnO, TiO₂, CuO) decorated multiwalled carbon nanotubes for bacterial and Volatile organic compound detection.

2009-2016

2. Dr. K.S. Ranjith ,RT Rajendra Kumar

Nanoengineered vertically aligned ZnO nanorod based hybrid and heterostructural arrays for photocatalytic and photovoltaic applications

2009- 2015

3. Dr. K. Rajkumar ,RT Rajendra Kumar

Controlled fabrication and multifunctional properties of silicon and metal decorated silicon nanostructures

2011-2017

4. Dr. C. Revathi ,RT Rajendra Kumar

Synthesis, characterization and testing of MnO₂/Multiwalled carbon nanotube nano composite for non-enzymatic electrochemical biosensors

2011-2017

5. Dr. C.R. Minitha ,RT Rajendra Kumar

Reduced graphene oxide based composites for water remediation and volatile organic compounds sensing applications

2011-2018

6. Dr. Nivedita L.R ,RT Rajendra Kumar

Growth, Characterization and ion irradiation effects on magnetic and magnetostrictive properties of GaFeIn

2011-2018

7. Dr. Debasis Maity ,RT Rajendra Kumar

Development of polymer-modified multiwalled carbon nanotubes based smart textile for wearable chemo-resistive sensors

2014- 2018

8. Dr. D. Ranjith Kumar ,RT Rajendra Kumar

Interfacial engineering of vertically aligned metal (M) sulphide (M=Cu, Fe, W)/ZnO heterojunction nanorod arrays for enhanced photocatalytic performance

2014-2019

9. Dr. M. Dinesh ,RT Rajendra Kumar

Metal Binary Oxides for High-performance Supercapacitors

2015-2021

1.C.R.Minitha

Synthesis and characterization of graphite oxide

2010

2.C.Revathi

Synthesis and characterization of ZnO and doped ZnO microstructures and its photocatalytic applications

2010

3.D.Nithyadevi

Synthesis, Characterization and photocatalytic properties of pure TiO₂ and Sn doped TiO₂ TiO₂ particles

2010

4.T.Saipriya

Wetting properties of silicon nanostructures

2010

5.K.Mangaiyarkarasi

Cd,Sn doped ZnO nanostructures – study on optical and photocatalytic properties

2011

6.Ashaq Hussain Shah

Qualitative assement of silver doped ZnO nanostructures decorated cotton for clinical applications

2011

7.P.Vairaselvi

Synthesis and characterization of TiO₂ based metal oxide nano composites

2011

8.R.Saranya

Characterization of MWCNTS synthesised by pyrolysis method
2012

9.P.Pabitha

Synthesis and properties of CuO-ZnO nanocomposites
2012

10.M.Dinesh

Pyrolysis synthesised multiwalled carbon nanotubes for vacuum sensing
2013

11.V.Anbumannan

Synthesis of ZnO nanostructures and their photocatalytic degradation of Azure II dye
2013

12.S.Bagyalakshmi

Synthesis and Glucose sensing properties of ZnO rods and ZnO flowers
2013

13.K.Nachimuthu

Synthesis and characterization of LiMgZnW nano composite
2013

14.V.R.Appu

Effect of nitrogen doped on tunable structures of pyrolysis synthesis multiwalled carbon nanotubes
2014

15.M.Martin a susan Archy

Synthesis, Characterization and dye adsorption properties of Fe₃O₄ and Fe:rGO nanocomposites
2015

16.R.Narmatha

Designed synthesis of Fe₃O₃ /reduced Graphene Oxide nanocomposite for visible light photo degradation
2015

17.A.Nancy

Electrochemical sensing of H₂O₂ using pristine, zinc oxide, copper oxide

decorated MWCNTS
2016

1. Nivedita L. Raveendran

Effect of substitution of Sn on the structural and magnetic properties of SmCo_{6.8-x}Sn_xZr_{0.2} (X= 0.1 & 0.3) Nanostructured metastable Alloys
2010

2. V.Mary Linose

Electrical studies on dispersed carbon nanotubes
2010

3. D. Nithyadevi

Synthesis characterization and photocatalytic properties of pure TiO₂ and Sn doped TiO₂ Nanoparticles
2010

4 C. R. Minitha

Synthesis and characterization of Graphite Oxide (GO)
2010

5 C. Revathi

Synthesis and characterization of ZnO and doped ZnO Microstructures and its photocatalytic applications
2010

6 P.Vairaselvi

Preparation and characterization of Ballmilled TiO₂ Nanoparticles
2010

7 Ashaq Hussain Shah

Qualitative assessment of silver doped ZnO Nanostructures decorated cotton fabrics for clinical application
2011

8 K. Balakumar

Metal nanoparticles decorated Carbon Nanotube
2011

9 K. Mangayakarasi

Cd, Sn doped ZnO nanostructures – study on optical and photocatalytic properties

2011

10 S. Ramkumar

Influence of cadmium Ion on the structural and optical properties of ZnO nanostructures

2012

11 M. Petchiammal

Preparation of Graphene Oxide and Graphene Oxide based epoxy Composites

2013

12 S. Mohanraj

Synthesis and characterization of metal sulfide decorated ZnO nanorod

2013

13 G. Praveen Kumar

Synthesis, characterization and photocatalytic application of graphite Oxide – TiO₂ Composites

2013

14 T. Kokulnathan

Synthesis of well dispersive palladium Nanoparticles on graphene oxide for DNA binding

2014

15 A.Pavula

Study on Tin oxide – reduced graphene oxide – polyaniline nano composites

2014

16 R. sukanya

Synthesis and characterization of Cerium Oxide coated silica nano particles

2014

17 R. Pavithra

Successive ionic layer adsorption and reaction technique for synthesis of

Nano crystalline Nickel Ferrite Thin films

2016

18 N.Abilash

Synthesis and characterization of Ag & Pt decorated On Au nano rods

2016

19 S.Rajeswari

A study on Photocatalytic degradation on industrial Dyes by Sn ion doped V2O5 Nanowires

2016

20 J. Jhansi Rani

Bioactive Hydroxyapatite/Graphene Oxide coatings On 316L Stainless steel for bio medical applications

2017

21 J. Kavya Nair

Processing and characterization of rare earth free Mn56Al44/Ni nanocomposite Magnets by spark plasma sintering

2016

22. K.Muthumalai

Synthesis of Fe3S4/ composite for energy storage application

2018

24. Saranya

Synthesis and characterization of MWCNTs/chitosan composite for ammonia gas sensing at room temperature

2018

25. R.Amirthavarshini

Synthesis and ammonia sensing characteristics of Ni sputtered WS2 thin film

2019

26. K.Veeramani

Synthesis and characterization of ZnO/CuS nanocomposite for humidity sensor

2020

27. P. Rupa Ranjani

Solvothermal assisted synthesis of CuFeS_2 nanoflakes as promising electrode materials for supercapacitors

2020

28. K. Sandhya

Sodium carbonate melt infiltrated ceria matrix composite electrolyte for improved ionic conductivity in LT-SOFC

2020

29. M.A. Muhammed Arshad

Synthesis, characterization and oxygen sensing properties of pyrolysis grown MWCNTs

2021

30. S. Dhinesh kumar

Synthesis, Characterization and gas sensing properties of $\text{g-C}_3\text{N}_4/\text{Fe-MOF}$ composite

2021

31. K.T. Rajarajeshwari

Electrochemical sensing of glyphosate by cobalt metal organic framework

2021

32. U. Agalya

Synthesis and electrochemical sensing of L-Cystaine using Fe MOF/GCN composite

2021

33. Priyambada Priyadharshnee

Wo_3 Decorated MoS_2 as an efficient electrocatalyst for HER

2022

34. M. Kamalesh

Synthesis and Characterization of Mn-doped ZnO for Photodegradation of Methylene Blue under Sunlight Irradiation.

2022

- [International](#)
- [National](#)
- [Patents](#)
- [Conferences](#)
- [Books / Chapters](#)
- [Database](#)

2022

119. [Green Chemistry Based Gold Nanoparticles Synthesis Using the Marine Bacterium PBCW2 and Their Multitudinous Activities](#)

T Cherian, D Maity, RTR Kumar, G Balasubramani, C Ragavendran, S Yalla, R Mohanraju, W JGM Peijnenburg
Nanomaterials, 12(17),2940 (2022)

118. [A cationic amino acid polymer nanocarrier synthesized in supercritical CO2 for co-delivery of drug and gene to cervical cancer cells](#)

KV Kavya, S Vargheese, S Shukla, I Khan, D Kumar Dey, V K Bajpai, KThangavelu, R Vivek, RTR Kumar, Y K Han, Y S Huh, Y Haldorai
Colloids and Surfaces B: Biointerfaces, 112584 (2022)

117. [Electrochemical Non-enzymatic sensor based on Co-H2ABDC Metal Organic Framework for detection of glyphosate](#)

N Gokila, K Muthumalai, Y Haldorai, RTR Kumar
Chemical Physics Letters,795, 139481(2022)

116. [Enhanced visible-light degradation of organic dyes via porous g-C3N4](#)

S Kumaravel, M Manoharan, Y Haldorai, RTR Kumar
Phosphorus, Sulfur, and Silicon and the Related Elements, 197,3, 200-208 (2022)

115. [Enhanced room temperature selective ammonia sensing based on SnO2 decorated MXene](#)

K Govindharaj, M Manoharan, K Rajavel, Y Haldorai, RTR Kumar,
Journal of Materials NanoScience, 9,1, 68-73 (2022)

114. [Visible light-assisted degradation of 4-nitrophenol and methylene blue using low energy carbon ion-implanted ZnO nanorod arrays: Effect on mechanistic insights and stability](#)

D R Kumar, K S Ranjith, Y Haldorai, A Kandasami, RTR Kumar
Chemosphere, 287, 132283 (2022)

2021

113. [Metal-organic frameworks with different oxidation states of metal nodes and aminoterephthalic acid ligand for degradation of Rhodamine B under solar light](#)

D Pattappan, S Vargheese, KV Kavya, RTR Kumar, Y Haldorai
Chemosphere, 286, 131726 (2021)

112. [Graphitic carbon nitride/NH₂-MIL-101 \(Fe\) composite for environmental remediation: Visible-light-assisted photocatalytic degradation of acetaminophen and reduction of hexavalent chromium](#)

D Pattappan, KV Kavya, S Vargheese, RTR Kumar, Y Haldorai
Chemosphere, 286, 131875 (2021)

111. [Palladium nanoparticles decorated Ni-MOF nanocomposite as an electrochemical platform for the selective detection of dopamine](#)

KV Kavya, D Muthu, D Pattappan, S Vargheese, N Gokila, MS Sivaramkumar, RTR Kumar, Y Haldorai,
Materials Letters, 130926 (2021)

110. [Heteroatom-doped mesoporous carbon prepared from a covalent organic framework/ \$\alpha\$ -MnO₂ composite for high-performance supercapacitor](#)

S Vargheese, D Pattappan, KV Kavya, MS Sivaramkumar,
RTR Kumar, Y Haldorai
Carbon Letters, 1-8, (2021)

109. [NiMoO₄ /reduced graphene oxide composite as an electrode material for hybrid supercapacitor](#)

D Muthu, S Vargheese, Y Haldorai, RTR Kumar
Materials Science in Semiconductor Processing, 135, 106078 (2021)

108. [Enhanced electrochemical detection of dopamine by graphene oxide/tungsten trioxide nanocomposite](#)

V. Anbumannan, RTR Kumar, K Suresh
Materials Science In Semiconductor, 127, 105696 (2021)

107. [Titanium-Based Metal-Organic Framework/TiO₂ Composite for Degradation of Dyes Under Solar Light Irradiation,](#)

D Pattappan, S Varghese, KV Kavya, RTR Kumar, Y Haldorai
Journal of Electronic Materials, 50,5, 2565-2575 (2021)

106. [MWCNT enabled smart textiles based flexible and wearable sensor for human motion and humidity monitoring](#)

D Maity, K Rajavel, RTR Kumar
Cellulose, 28, 4, 2505-2520 (2021)

2020

105. [Hierarchical flower-like MnO₂@ nitrogen-doped porous carbon composite for symmetric supercapacitor: Constructing a 9.0 V symmetric supercapacitor cell](#)

S Vargheese, D Muthu, D Pattappan, KV Kavya, RTR Kumar, Y Haldorai,
Electrochemical Acta, 364, 137291 (2020)

104. [Mn-Ni binary metal oxide for high-performance supercapacitor and electro-catalyst for oxygen evolution reaction,](#)

M Dinesh, Yuvaraj Haldorai, RTR Kumar,
Ceramic international, 46, 28006-28012 (2020)

103. [Solvothermal synthesis of Fe₃S₄@graphene composite electrode materials for energy storage](#)

M Karuppasamy, M Dinesh, Y Haldorai & RTR Kumar
Carbon Letters, 30, 667-673 (2020)

102. [Magnetite-Decorated Reduced Graphene Oxide: A Study of Multifunctional Antibacterial and Removal of Lead Ion Properties for Water Disinfection Applications\](#)

C R Minitha, K Rajavel, RTR Kumar
Advanced Engineering Materials, 22, 2000395 (2020)

101. [Triazine-based 2D covalent organic framework-derived nitrogen-doped porous carbon for supercapacitor electrode](#)

S Vargheese, M Dinesh, K. V. Kavya, D Pattappan, RTR Kumar & Y Haldorai
Carbon Letters, 1-8 (2020)

100. [Plasmonic effect and charge separation-induced photocatalytic degradation of organic dyes utilizing Au/ZnFe₂O₄@rGO ternary composite](#)

D Pattappan, K. V. Kavya, S Varghese, RTR Kumar & Y Haldorai
Applied Physics A, 126, 1-9 (2020)

99. [Development of the PANI/MWCNT nanocomposite-based fluorescent sensor for selective detection of aqueous Ammonia](#)

D Maity, M Manoharan, RTR Kumar
ACS Omega, 5, 15, 8414-8422 (2020)

98. [CdTe nanorods for nonenzymatic hydrogen peroxide biosensor and optical limiting applications](#)

M Manikandan, C Revathi, P Senthilkumar, S Amreetha, S Dhanuskodi, RTR Kumar
Ionics, 26, 2003-2010 (2020)

97. [Promotional Effect of Cu₂S-ZnS Nanograins as a Shell Layer on ZnO Nanorod Arrays for Boosting Visible Light Photocatalytic H₂ Evolution](#)

K S Ranjith, D R Kumar, Y S Huh, YK Han, T Uyar, RTR Kumar
The Journal of Physical Chemistry C, 124, 6, 3610-3620 (2020)

96. [A radially controlled ZnS interlayer on ultra-long ZnO-Gd₂S₃ core-shell nanorod arrays for promoting the visible photocatalytic degradation of antibiotics](#)

K S Ranjith, D R Kumar, Seyed Majid Ghoreishian, Y S Huh, Young-Kyu Han, RT Rajendra
Nanoscale, Royal Society of Chemistry, 12, 26, 14047-14060 (2020).

2019-2004

95. [Glucose oxidase immobilized amine terminated multiwall carbon nanotubes/reduced graphene oxide/polyaniline/gold nanoparticles modified screen-printed carbon electrode for highly sensitive amperometric glucose detection,](#)

Debasis Maity, CR Minitha, RTR Kumar
Materials Science and Engineering: C, 105, 110075 (2019)

94. [Hierarchical \$\alpha\$ -MnO₂ wrapped MWCNTs sensor for low level detection of p-nitrophenol in water](#)

V Anbumannan, M Dinesh RTR Kumar, K Suresh,

Ceramics International, 45, 23097-23103 (2019)

93. [Birnessite MnO₂ Decorated MWCNTs Composite as a Nonenzymatic Hydrogen Peroxide Sensor,](#)

M Dinesh, C Revathi, Y Haldorai, RTR Kumar,
Chemical Physics Letters, 45, 23097-23103 (2019)

92. [Synthesis of triazine-based porous organic polymer: A new material for double layer capacitor](#)

S Vargheese, RTR Kumar, Y Haldorai
Material Letters, 249, 53-56 (2019)

91. [Nitrogen-Implanted ZnO Nanorod Arrays for Visible Light Photocatalytic Degradation of a Pharmaceutical Drug Acetaminophen](#)

D R Kumar, K S Ranjith, Y Haldorai, K Asokan, RTR Kumar
ACS Omega, 4, 11973-11979 (2019)

90. [Tuning the electrical properties of graphene oxide by nitrogen ion implantation: Implication for gas sensing](#)

CR Minitha, LR Nivedita, K Asokan, RTR Kumar
Nuclear Instruments and Methods in Physics Research Section B: Beam Interaction with Materials and atoms, 450, 257-261 (2019)

89. [Swift heavy ion induced effects on structural, optical and photocatalytic properties of Ag irradiated vertically aligned ZnO nanorod arrays](#)

D Ranjith Kumar, KS Ranjith, LR Nivedita, K Asokan, RTR Kumar
Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 450, 95-99 (2019)

88. [Highly sensitive amperometric detection of glutamate by glutamic oxidase immobilized Pt Nanoparticle decorated multiwalled carbon nanotubes \(MWCNTs\)/Polypyrrole composite](#)

Debasis Maity, RTR Kumar
Biosensors and Bioelectronics, 130, 307-314 (2019)

87. [Influence of Fe₃O₄ nanoparticles decoration on dye adsorption and magnetic separation properties of Fe₃O₄/rGO nanocomposites](#)

CR Minitha, M Martina Susan Arachy, RTR Kumar
Separation Science and Technology, 53 (14), 2159-2169 (2018)

86. [Polyaniline Anchored MWCNTs on Fabric for High Performance Wearable Ammonia Sensor](#)

Debasis Maity and RTR Kumar
ACS Sensors, 3 (9), 1822-1830 (2018)

85. [Selective Methanol Detection of Pyrolysis Grown Multiwalled Carbon Nanotubes,](#)

K Rajavel, RTR Kumar,
Advanced Science Letters, 24, 8, 5645-5650(6) (2018)

84. [Polyvinyl alcohol wrapped multiwall carbon nanotube \(MWCNTs\) network on fabrics for wearable room temperature ethanol sensor](#)

D Maity, K Rajavel, RTR Kumar
Sensors and Actuators B: Chemical, 261, 297-306 (2018)

83. [Evolution of Visible Photocatalytic Properties of Cu-Doped CeO₂ Nanoparticles: Role of Cu²⁺-Mediated Oxygen Vacancies and the Mixed-Valence States of Ce Ions](#)

K S Ranjith, CL Dong, YR Lu, YC Huang, CL Chen, P Saravanan, K Asokan, and RTR Kumar
ACS Sustainable Chemistry & Engineering, 6, 7, 8536-8546 (2018)

82. [One-Step Pyrolytic Synthesis of Multiwalled Carbon Nanotubes: The Role of Resupply of Carbon Species on the Quality Control](#)

K Rajavel, P Saravanan, RTR Kumar
Journal of Nanoscience and Nanotechnology, 18 (5), 3536-3542 (2018)

81. [Impact of oxygen functional groups on reduced graphene oxide-based sensors for ammonia and toluene detection at room temperature](#)

CR Minitha, VS Anithaa, V Subramaniam, RTR Kumar
ACS Omega, 3 (4), 4105-4112 (2018)

80. [Enhancement of magnetostrictive properties of Galfenol thin films](#)

LR. Nivedita, P Manivel, R Pandian, S Murugesan, NA Morley, K Asokan, RTR Kumar
Journal of Magnetism and Magnetic Materials, 451, 300-304 (2018)

79. [Effective shell wall thickness of vertically aligned ZnO-ZnS core-shell nanorod arrays on visible photocatalytic and photo sensing properties](#)

K S Ranjith, R B Castillo, M Sillanpaa, RTR Kumar

Applied Catalysis B: Environmental, 237, 128-139 (2018)

[78. Influence of Sn ion doping on the photocatalytic performance of V2O5 nanorods prepared by hydrothermal method](#)

S Rajeshwari, J Santhosh Kumar, RTR Kumar, N Ponpandian, P Thangadurai, Materials Research Express, 5 (2), 025507 (2018)

[77. Structural, optical, photocurrent and solar driven photocatalytic properties of vertically aligned samarium doped ZnO nanorod arrays](#)

D Ranjith Kumar, KS Ranjith, RTR Kumar
Optik, 154, 115-125 (2018)

[76. Magnetite nanoparticles decorated reduced graphene oxide composite as an efficient and recoverable adsorbent for the removal of cesium and strontium ions,](#)

C R Minitha, R Suresh, U K Maity, Y Haldorai, V Subramaniam, P Manoravi, M Joseph, RTR Kumar
Industrial & Engineering Chemistry Research, 57, 4, 1225-1232 (2018)

[75. Multifunctional ZnO Nanorod-Reduced Graphene Oxide Hybrids Nanocomposites for Effective Water Remediation: Effective Sunlight Driven Degradation of Organic Dyes and Rapid Heavy Metal Adsorption](#)

K. S. Ranjith, P. Manivel, RTR Kumar, Tamer Uyar
Chemical Engineering Journal, 325, 588-600 (2017)

[74. Effect of samarium doping on structural, optical and magnetic properties of vertically aligned ZnO nanorod arrays](#)

DR Kumar, KS Ranjith, LR Nivedita, RTR Kumar
Journal of Rare Earths, 35 (10), 1002-1007 (2017)

[73. Engineering Silicon to porous silicon nanowires by Metal Assisted Chemical Etching: Role of Ag size and electron scavenging rate on morphology control and mechanism](#)

K. Rajkumar, R. Pandian, S. Amirthapandian and RTR Kumar
ACS Omega, 2, 4540-4547 (2017)

[72. In situ attachment and its hydrophobicity of size- and shape-controlled silver nanoparticles on fabric surface for bioapplication](#)

K Rajavel, R Gomathi, R Pandian, RTR Kumar

Inorganic and Nano-Metal Chemistry, 47 (8), 1196-1203 (2017)

71. [Adsorption behaviour of reduced graphene oxide towards cationic and anionic dyes: Co-action of electrostatic and \$\pi - \pi\$ interactions](#)

C.R. Minitha, M. Lalitha, Y.L. Jeyachandran, L. Senthilkumar, RTR Kumar

Materials Chemistry and Physics, 194, 243-252 (2017)

70. [Robust water repellent ZnO nanorod array by Swift Heavy Ion Irradiation: Effect of Electronic Excitation Induced Local Chemical State Modification](#)

KS Ranjith, LR Nivedita, K Asokan, RTR Kumar

Scientific reports, 7, 3251 (2017)

69. [Ultrasonic Assisted Synthesis of Superhydrophobic ZnO Nanowall Films](#)

S. Sutha, RTR Kumar

Bulletin of Materials Science, 40(3), 505-511 (2017)

68. [Phase evolution and magnetic properties of DC sputtered Fe-Ga \(Galfenol\) thin films with growth temperatures](#)

Nivedita L. Raveendran, R Pandian, S Murugesan, K Asokan RTR Kumar

Journal of Alloys and Compounds, 704, 420-424 (2017)

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C Revathi, RTR Kumar

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