



**Dr. R. Yuvakkumar**  
**Assistant Professor**

### Contact

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Date of Birth : 27-05-1983

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**Academic Qualifications: M.A., M.Sc., M.Ed., M.Phil., Ph.D.**

**Teaching Experience: 05 Years**

**Research Experience: 10 Years**

### Areas of Research

Supercapacitors, Water splitting, Nanomaterials, Thin Films

## Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	--	02
	M.Phil.	02	02
Project	PG	06	05

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
52	05	1	10	05

Cumulative Impact Factor (as per JCR) :	90
h-index :	11
i10 index :	15
Total Citations :	418

## Funded Research Projects

### Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DRDO New Delhi	2008	2009	Mapping of Indian capability on Nano Science and Technology	6.5

### Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	UGC	2017	2019	Development, characterization and cancer targeting potential of bioinspired magnetite (Fe <sub>3</sub> O <sub>4</sub> ) nanopowders	10.29

## Patents

1. Sun Ig Hong, Suresh, J., **Yuvakkumar, R.**, A. Joseph Nathanael., and Sundrarajan, M., Method for Manufacturing ZnO Nanopowder and ZnO Nanopowder Manufactured by the Method, Korean Patent Number 10-1617994, Registration No.:1016179940000 Registration Date : 2016.04.27.
2. Rajendran, V., Kannan, N., **Yuvakkumar, R.**, Elango V. and Manivasakan, P. A novel approach to prepare crystalline nano molybdenum particles, Indian Patent Ref. No.: 218/CHE/2009 dt. 30.01.2009, Journal No. 33/2010; Publication Date: 13/08/2010.
3. Rajendran, V., Suryaprabha, R., Shanmuga Priya, D. and Yuvakkumar, R., P. TiO<sub>2</sub> and Neem Doped Chitosan - Hydroxypropyl Methylcellulose Nanocomposite Films for Food Packaging Applications, Indian Patent Ref. No.: 736/CHE/2014 dt. 17.02.2014. Journal No. 33/2010; Publication Date: 21/08/2015.
4. Sundrarajan, M., Sun Ig Hong, Suresh, J., **Yuvakkumar, R.**, and Rajiv Gandhi, R. Bioinspired metal oxide nanopowders for biomedical applications, Indian Patent Ref. No.: 3557/CHE/2014 dt. 20.07.2014. Journal No. 33/2010; Publication Date: 01/07/2016.
5. Rajendran, V., Kannan, N., and Yuvakkumar, R., Influence of nano silica on the growth and yield of maize crop, Indian Patent Ref. No.: 1135/CHE/2009 dt. 18.05.2009, Journal No. 33/2010; Publication Date: 25/03/2016.

## R&D Books

1. **Abstract Book** - IUPAC-Sponsored International Conference on Nanomaterials and Nanotechnology (NANO-2010), Macmillan Advanced Research Series (ISBN 023-033-206-4), Edited by V. Rajendran, P. Manivasakan, **R. Yuvakkumar**, P. Paramasivam, B. Hillebrands and K. E. Geckeler.
2. **Compendium on Indian Capability on Nanoscience and Technology**, Published by Macmillan Publishers India Ltd (ISBN 978-935-059-030-0) Edited by V.Rajendran, W.Selvamurthy, K.Saminathan, D.B.S.Sethi, P.Prabu, **R.Yuvakkumar**, P.Manivasakan and P.Paramasivam.
3. **Proceeding Book on Applications of Nano Materials: Electronics, Energy and Environment** - IUPAC-Sponsored International Conference on MACRO-AND SUPRAMOLECULAR ARCHITECTURES AND MATERIALS (MAM-12): Nano Systems and Applications, Bloomsbury Publishing India PVT. Limited (ISBN 978-93-82563-35-8), Edited by V. Rajendran, **R. Yuvakkumar**, K. Thyagarajah and K.E. Geckeler.

## R&D Book Chapters

1. Structural characterization of beryllium and indium oxide powders, **R. Yuvakkumar**, V. Milton, G. Ravi, S.I. Hong, Contemporary Dielectric Materials, Chapter 9, Materials Research Forum, Published online 1/1/2017, 16 pages, DOI: <http://dx.doi.org/10.21741/9781945291135-9>.
2. Synthesis and structural characterization of gallium oxide powders **R. Yuvakkumar**, D. Sidharth, G. Ravi, S.I. Hong, Contemporary Dielectric Materials, Chapter 9, Materials Research Forum, Published online 1/1/2017, 9 pages, DOI: <http://dx.doi.org/10.21741/9781945291135-2>.

## Distinctive Achievements / Awards

1. **Brain Korea Research Fellowship**, National Research Foundation, South Korea
2. **Senior Research Scientist**, University of Science and Technology, South Korea

## Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized:

1. Organizing Secretary, National Seminar on Advanced Materials Research, Alagappa University, 19<sup>th</sup> January, 2017.
2. Active Member of Organising Committee, INTERNATIONAL CONFERENCE, MAM-2012, November 21-25, 2012.
3. Active Member of Organising Committee, DST-INSPIRE PROGRAMME, 2011.
4. Active Member of Organising Committee, INTERNATIONAL CONFERENCE, NANO-2010, December 13-16, 2010.
5. Active Member of Organising Committee, DST PAC (Project Advisory Committee) Meeting, July 6-9, 2009
6. Active Member of Organising Committee, National Symposium on Acoustics NSA 2007, December 5-7, 2007
7. Active Member of Organising Committee, National Symposium Instrumentation'32 (NSI'32), October 24-26, 2007

## Events Participated

Conferences / Seminars / Workshops:

1. Yuvakkumar and V., Rajendran A comprehensive review of nanomolybdenum materials preparation, International Symposium on Macro- and Supramolecular Architectures and Materials (MAM 2012), India, November 21-25, 2012.

2. Yuvakkumar, R., Elango, V., Rajendran, V. and Kannan, N. Preparation and characterization of zero-valent iron nanoparticles, International Conference on Nano Materials and Nano Technology (NANO 2010), India, December 13-16, 2010.
3. Rajendran, V., Yuvakkumar, R. and Kannan, N. Impact of nano silica powders on the growth of maize crop, International Conference on Food and Agriculture Applications of Nanotechnologies (NANOAGRI 2010), Brazil June 20-25, 2010.
4. Yuvakkumar, R., Elango, V., Kannan, N. and Rajendran, V. Impact of nano silica on growth and yield of maize crop, International Conference on Recent Trends in Nano & Bio Sciences (ICORTNBS 2010), Hyderabad, Feb 24-26, 2010.
5. Yuvakkumar, R., Elango, V., Kannan, N. and Rajendran, V. Influence of nano silica particles on the growth of maize crop, International Conference on Nano Materials (ICNM-2009), Kottayam, April 06-08, 2009.

### Overseas Exposure / Visits

1. **Senior Research Scientist**, Division of Physical Metrology, Korea Research Institute of Standards and Science, Daejeon 305-600, South Korea, 2014-2015.
2. **Post-Doctoral Researcher**, Department of Nanomaterials and Engineering, Chungnam National University, Daejeon, South Korea, 2013- 2014.
3. 14<sup>th</sup> Asian Chemical Congress (14 ACC), Contemporary Chemistry for Sustainability and Economic Sufficiency, 5-8 September 2011, Bangkok, Thailand. Yuvakkumar, R., and Rajendran, V. Influence of nano nutrients on heterocyst forming cyanobacterium *Anabaena ambigua* Rao.
4. EMCEM 2014 - 2<sup>nd</sup> International conference on Energy Material, Chemical Engineering and Mining Engineering, 11-12 January 2014, Wuhan, China. R. Yuvakkumar, J. Suresh, A. Joseph Nathanael, M. Sundrarajan and S.I. Hong A comparative study on antibacterial and wash durability behaviour of ZnO and CuO nanoparticles treated cotton fabric using sodium alginate as cross linker.
5. 2<sup>nd</sup> International conference on Mechanics, Dynamic Systems and Material Engineering (MDSME2014), May 24-25, 2014, Guangzhou, China. R. Yuvakkumar, J. Suresh and S.I. Hong Green synthesis of zinc oxide nanoparticles.
6. The Korean Institute of Metal and Materials / 2014 Spring Meeting, April 24-25, 2014, Daegu, South Korea. R. Yuvakkumar, K. Yong Keun, A. Joseph Nathanael and S.I. Hong Rambutan peels promoted biomimetic synthesis of zinc oxide nanocrystals.

## Membership in

### Professional Bodies

1. Life Member: Indian Physics Association, Life Membership No. GEN/LM/13172
2. Life Member: PVR Research Foundation.

### Editorial Board

1. Journal of Condensed Matter & Materials Physics.

### Advisory Board

1. 2017 International Conference on Materials Engineering and Nano Sciences Singapore January 7-9, 2017, Conference Technical Committee

### Academic Bodies (such as Board of Studies etc.,)

1. Sri Vasavi College, Erode
2. K.S.R. Rangasamy College of Technology, Tiruchengode

### Others

1. Doctoral Committee Member, Periyar University
2. Doctoral Committee Member, Periyar University
3. Doctoral Committee Member, Karunya University

## Resource persons in various capacities

Number of Invited / Special Lectures delivered: 10

### Others

1. Articles published in Newspapers / Magazines : 02
2. Products developed : 03

## Recent Publications

2017 (1)		
54	B. Saravanakumar, B. Jansi Rani, G. Ravi, M. Thambidurai, <b>R. Yuvakkumar</b>	2.357
	Reducing agent (NaBH <sub>4</sub> ) dependent structure, morphology and magnetic	

	properties of nickel ferrite (NiFe <sub>2</sub> O <sub>4</sub> ) nanorods	
	Journal of Magnetism and Magnetic materials, Vol. 428, pp.78–85, 2017	
<b>2016 (3)</b>		
<b>53</b>	<b>R. Yuvakkumar</b> , Jae Sook Song, Pyung Woo Shin, Sun Ig Hong	
	Environment-Friendly Synthesis of Nanocrystalline Zinc Oxide Particles Using Fruit Peel Extract	
	Korean J. Mater. Res. Vol. 26, No. 6, 311-319, 2016	
<b>52</b>	<b>R Yuvakkumar</b> , SI Hong	<b>2.736</b>
	Structural and toxic effect investigation of vanadium pentoxide	
	Materials Science and Engineering: C, Vol. 65, pp. 419–424, 2016	
<b>51</b>	R.Rajesh Kanna, N. R. Dhineshababu, P. Paramasivam, <b>R. Yuvakkumar</b> , V. Rajendran	<b>1.340</b>
	Synthesis of geikilite (MgTiO <sub>3</sub> ) nanoparticles via solgel method and studies on their structural and optical properties	
	Journal of Nanoscience and Nanotechnology, Vol.15, pp. 2523-2530, 2015	
<b>2015 (9)</b>		
<b>50</b>	<b>R. Yuvakkumar</b> , P. Peranantham, A. Joseph Nathanael, D. Nataraj, D. Mangalaraj, S.I. Hong	<b>1.340</b>
	Macroparticles Reduction Using Filter Free Cathodic Vacuum Arc Deposition Method in ZnO Thin Films	
	Journal of Nanoscience and Nanotechnology, Vol.15, pp. 2523-2530, 2015	
<b>49</b>	<b>R. Yuvakkumar</b> , J. Suresh, B. Saravanakumar, A. Joseph Nathanael, V. Rajendran, S.I. Hong	<b>2.129</b>
	Rambutan peels promoted biomimetic synthesis of bioinspired zinc oxide nanochains for biomedical applications	
	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Vol. 137, pp. 250-258, 2015 ( <b>Research Highlighted in Global Medical Discovery Magazine</b> )	
<b>48</b>	<b>R. Yuvakkumar</b> , S.I. Hong	<b>1.966</b>
	Incubation and aging effect on cassiterite type tetragonal rutile SnO <sub>2</sub> nanocrystals	
	Journal of Materials Science: Materials in Electronics, Vol. 26, pp. 2305-2310, 2015	

<b>47</b>	<b>R. Yuvakkumar</b> , J. Suresh, B. Saravanakumar, A. Joseph Nathanael, V. Rajendran, S.I. Hong	<b>3.209</b>
	An environment benign biomimetic synthesis of mesoporous NiO concentric stacked doughnuts architecture	
	Microporous & Mesoporous Materials, Vol. 207, pp. 185-194, 2015	
<b>46</b>	<b>R. Yuvakkumar</b> , A. Joseph Nathanael, S.I. Hong,	<b>1.547</b>
	Nd <sub>2</sub> O <sub>3</sub> : Novel synthesis and characterization	
	Journal of Sol-Gel Science and Technology, Vol. 73, pp. 511-517, 2015	
<b>45</b>	<b>R. Yuvakkumar</b> , S.I. Hong	<b>2.129</b>
	Structural, compositional and textural properties of monoclinic $\alpha$ -Bi <sub>2</sub> O <sub>3</sub> nanocrystals	
	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Vol. 144, pp. 281-286, 2015	
<b>44</b>	<b>R. Yuvakkumar</b> , S.I. Hong	<b>1.044</b>
	Structural phase transitions in niobium oxide nanocrystals	
	Phase Transitions, Vol. 88, pp. 897-906, 2015	
<b>43</b>	S. Sam Jaikumar, <b>R. Yuvakkumar</b> , R. Suriya Prabha, G. Karunakaran, V. Rajendran, S.I. Hong	<b>1.723</b>
	A facile and novel synthetic method to prepare nano molybdenum and its catalytic activity	
	IET Nanobiotechnology, Vol. 9, pp. 201 - 208, 2015	
<b>42</b>	A. Joseph Nathanael, Young Min Im, Tae Hwan Oh, <b>R. Yuvakkumar</b> , D. Mangalaraj	<b>2.538</b>
	Biomimetic Hierarchical Growth and Self-Assembly of Hydroxyapatite/Titania Nanocomposite Coatings and their Biomedical Applications	
	Applied Surface Science, Vol. 332, pp. 368-378, 2015	
<b>41</b>	R. Yuvakkumar, S. I. Hong,	
	Baddeleyite Type Monoclinic Zirconium Oxide Nanocrystals Formation	
	Advanced Materials Research, Vol. 1102, pp. 79-82, May. 2015	
<b>2014 (20)</b>		
<b>40</b>	P. Deniz Wong, R. Suriyaprabha, <b>R. Yuvakkumar</b> , V. Rajendran, Y.T. Chen, B.J. Hwang, L.C. Chen, K.H. Chen	<b>6.626</b>



	Binder-free rice husk-based silicon-graphene composite as energy efficient Li-ion battery anodes	
	J. Mater. Chem. A, Vol. 2, pp. 13437-13441, 2014	
<b>39</b>	A. Joseph Nathanael, <b>R. Yuvakkumar</b> , Sun Ig Hong, Tae Hwan Oh	<b>5.9</b>
	Novel Zirconium Nitride and Hydroxyapatite Nanocomposite Coating: Detailed Analysis and Functional Properties	
	ACS Appl Mater Interfaces, Vol. 6, pp. 9850-9857, 2014	
<b>38</b>	K. Sasipriya, P. Manivasakan, <b>R. Yuvakkumar</b> , N. Dhineshbabu, P. Prabu, V. Rajendran	<b>0.571</b>
	Enhancement of UV property on cotton fabric by TiO <sub>2</sub> nanorods	
	Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, Vol. 44, pp. 748-758, 2014	
<b>37</b>	S. Shanmugapriya, R. Suriyaprabha, <b>R. Yuvakkumar</b> , V. Rajendran	<b>2.278</b>
	Chitosan-Incorporated Different Nanocomposite HPMC Films for Food Preservation	
	Journal of Nanoparticle Research, Vol. 16, pp. 2248, 2014	
<b>36</b>	R. Suriyaprabha, G. Karunakaran, <b>R. Yuvakkumar</b> , V. Rajendran, N. Kannan	<b>0.571</b>
	Foliar application of silica nanoparticles on the phytochemical responses of maize ( <i>Zea mays</i> L.) and its toxicological behavior	
	Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, Vol. 44, pp. 1128-1131, 2014	
<b>35</b>	R. Suriyaprabha, G. Karunakaran, M. Prabhu, <b>R. Yuvakkumar</b> , V. Rajendran, N. Kannan	<b>3.708</b>
	Augmented biocontrol action of silica nanoparticles and <i>Pseudomonas fluorescens</i> bioformulant in maize ( <i>Zea mays</i> L.)	
	RSC Advances, Vol. 4, pp. 8461-8465, 2014	
<b>34</b>	R. Suriyaprabha, G. Karunakaran, K. Kavitha, <b>R. Yuvakkumar</b> , V. Rajendran, N. Kannan,	<b>1.723</b>
	Application of silica nanoparticles in maize to enhance fungal resistance	
	IET Nanobiotechnology, Vol.8, pp. 133-137, 2014	
<b>33</b>	K. Jothi Ramalingam, N.R. Dhineshbabu, S.R. Srither, B. Saravanakumar, <b>R. Yuvakkumar</b> , V. Rajendran	<b>2.222</b>
	Electrical measurement of PVA/graphene nanofibers for transparent	

	electrode applications	
	Synthetic Metals, Vol. 191, pp. 113–119, 2014	
<b>32</b>	<b>R. Yuvakkumar</b> , V. Elango, V. Rajendran, N. Kannan	<b>1.043</b>
	High-purity nano silica powder from rice husk using a simple chemical method	
	Journal of Experimental Nanoscience, Vol.9, pp. 272-281, 2014	
<b>31</b>	<b>R. Yuvakkumar</b> , A. Joseph Nathanael, S.I. Hong	<b>3.708</b>
	Inorganic complex intermediate $\text{Co}_3\text{O}_4$ nanostructures using green ligation from natural waste resources	
	RSC Advances, Vol. 4, pp. 44495–44499, 2014	
<b>30</b>	<b>R. Yuvakkumar</b> , J. Suresh, A. Joseph Nathanael, M. Sundrarajan, S.I. Hong	<b>2.736</b>
	Novel green synthetic strategy to prepare ZnO nanocrystals using rambutan (Nephelium lappaceum L.) peel extract and its antibacterial applications	
	Materials Science and Engineering: C, Vol. 41, pp. 17–27, 2014	
<b>29</b>	<b>R. Yuvakkumar</b> , J. Suresh, A. Joseph Nathanael, M. Sundrarajan, S.I. Hong	<b>2.269</b>
	Rambutan (Nephelium lappaceum L.) peel extract assisted biomimetic synthesis of nickel oxide nanocrystals	
	Materials Letters, Vol. 128, pp. 170-174, 2014	
<b>28</b>	<b>R. Yuvakkumar</b> , A. Joseph Nathanael, V. Rajendran, S.I. Hong	<b>1.547</b>
	Rice husk ash nanosilica to inhibit human breast cancer cell line (3T3)	
	Journal of Sol-Gel Science and Technology, Vol. 72, pp. 198–205, 2014	
<b>27</b>	R Suriyaprabha, G. Karunakaran, <b>R. Yuvakkumar</b> , P. Prabu, V. Rajendran, N. Kannan	<b>1.322</b>
	Effect of silica nanoparticles on microbial biomass and silica availability in maize rhizosphere	
	Biotechnology and Applied Biochemistry, Vol. 61, pp. 668–675, 2013	
<b>26</b>	J. Suresh, <b>R. Yuvakkumar</b> , M. Sundrarajan, S.I. Hong	
	Green synthesis of magnesium oxide nanoparticles	
	Advanced Material Research Vol. 952, pp. 141-144, 2014	
<b>25</b>	A. Joseph Nathanael, <b>R. Yuvakkumar</b> , Tae Hwan Oh, S.I. Hong	
	High Aspect Ratio Hydroxyapatite Nanorods Formed by Polymer Assisted	

	Synthesis	
	Applied Mechanics and Materials Vol. 508, pp. 52-55, 2014	
<b>24</b>	J. Suresh, <b>R. Yuvakkumar</b> , A. Joseph Nathanael, M. Sundrarajan, S.I. Hong	
	Antibacterial and wash durability properties of untreated and treated cotton fabric using MgO and NiO nanoparticles	
	Applied Mechanics and Materials, Vol. 508, pp. 48-51, 2014	
<b>23</b>	<b>R. Yuvakkumar</b> , J. Suresh, and S.I. Hong	
	Green synthesis of zinc oxide nanoparticles	
	Advanced Material Research Vol. 952, pp. 137-140, 2014	
<b>22</b>	<b>R. Yuvakkumar</b> , J. Suresh, A. Joseph Nathanael, M. Sundrarajan, S.I. Hong	
	A comparative study on antibacterial and wash durability behaviour of ZnO and CuO nanoparticles treated cotton fabric using sodium alginate as cross linker	
	Applied Mechanics and Materials Vol. 508, pp. 44-47, 2014	
<b>21</b>	<b>R. Yuvakkumar</b> , J. Suresh, S.I. Hong	
	Green synthesis of spinel magnetite iron oxide nanoparticles	
	Advanced Material Research Vol. 1051, pp. 39-42, 2014	
<b>2013 (9)</b>		
<b>20</b>	S. Ezhaveni, <b>R. Yuvakkumar</b> , M. Rajkumar, N. Meenakshi Sundaram, V. Rajendran	<b>1.340</b>
	Preparation and characterization of nano-hydroxyapatite material for liver cancer cell treatment	
	Journal of Nanoscience and Nanotechnology, Vol.13, pp. 1631–1638, 2013	
<b>19</b>	N. R. Dhineshababu, P. Manivasakan, <b>R. Yuvakkumar</b> , P. Prabu, V. Rajendran	<b>1.340</b>
	Enhanced Functional Properties of ZrO <sub>2</sub> /SiO <sub>2</sub> Hybrid Nanosol Coated Cotton Fabrics	
	Journal of Nanoscience and Nanotechnology, Vol. 13, pp. 4017–4024, 2013	
<b>18</b>	S. R. Srither, M. Selvam, S. Arunmetha, <b>R. Yuvakkumar</b> , K. Saminathan, V. Rajendran	<b>2.908</b>
	Enhancement of Discharge Capacity of Mg/MnO <sub>2</sub> Primary Cell with Nano-MnO <sub>2</sub> as Cathode	
	Sci. Adv. Mater. Vol. 5, pp. 1372-1376, 2013	

<b>17</b>	G. Karunakaran, R. Suriyaprabha, P. Manivasakan, <b>R. Yuvakkumar</b> , V. Rajendran, N. Kannan	<b>1.340</b>
	Impact of Nano and Bulk ZrO <sub>2</sub> , TiO <sub>2</sub> Particles on Soil Nutrient Contents and PGPR	
	Journal of Nanoscience and Nanotechnology, Vol. 13, pp. 678–685, 2013	
<b>16</b>	G. Karunakaran, R. Suriyaprabha, P. Manivasakan, <b>R. Yuvakkumar</b> , V. Rajendran, N. Kannan	<b>2.482</b>
	Screening of in vitro cytotoxicity, antioxidant potential and bioactivity of nano- and micro-ZrO <sub>2</sub> and -TiO <sub>2</sub> particles	
	Ecotoxicology and Environmental Safety, Vol. 93, pp. 191–197, 2013	
<b>15</b>	G. Karunakaran, R. Suriyaprabha, P. Manivasakan, <b>R. Yuvakkumar</b> , V. Rajendran, P. Prabu, N. Kannan	<b>1.723</b>
	Effect of nanosilica and silicon sources on plant growth promoting rhizobacteria, soil nutrients and maize seed germination	
	IET Nanobiotechnology, Vol.7, pp. 70–77, 2013	
<b>14</b>	A. Karthik, P. Manivasakan, S. Arunmetha, <b>R. Yuvakkumar</b> , V. Rajendran	<b>1.215</b>
	Production of Al <sub>2</sub> O <sub>3</sub> -stabilised tetragonal ZrO <sub>2</sub> nanoparticles for thermal barrier coating	
	International Journal of Applied ceramics Technology, Vol.10, pp. 887–899, 2013	
<b>13</b>	S. Sutha, <b>R. Yuvakkumar</b> , V. Rajendran, R. Palanivelu	<b>2.269</b>
	Effect of Thermal Treatment on Hydrophobicity of Methyl Functionalised Hybrid Nano Silica Particles	
	Materials Letters, Vol. 90, pp. 68–71, 2013	
<b>12</b>	S. Venkateshwaran, <b>R. Yuvakkumar</b> , V. Rajendran	<b>0.829</b>
	Nano Silicon from Nano Silica Using Natural Resource (RHA) for Solar Cell Fabrication.	
	Phosphorus, Sulfur, and Silicon and the Related Elements, Vol. 188, pp. 1178–1193, 2013	
<b>2012 (5)</b>		
<b>11</b>	K. Saravanan, <b>R. Yuvakkumar</b> , V. Rajendran, P. Paramasivam	<b>1.044</b>
	Influence of sintering temperature and pH on the phase transformation, particle size and anti-reflective properties of RHA nano silica powders	

	Phase Transitions, Vol. 85, pp. 1109–1124, 2012	
<b>10</b>	R. Suriyaprabha, G. Karunakaran, <b>R. Yuvakkumar</b> , P. Prabu, V. Rajendran, N. Kannan	<b>2.278</b>
	Growth and physiological responses of maize ( <i>Zea mays L.</i> ) to porous silica nanoparticles in soil	
	Journal of Nanoparticle Research, Vol.14, pp.1294–96, 2012	
<b>9</b>	R. Suriyaprabha, G. Karunakaran, <b>R. Yuvakkumar</b> , V. Rajendran, N. Kannan	<b>1.422</b>
	Silica Nanoparticles for Increased Silica Availability in Maize ( <i>Zea mays. L</i> ) Seeds under Hydroponic Conditions	
	Current Nanoscience, Vol. 8, pp. 902-908, 2012	
<b>8</b>	N. Vadivel, <b>R. Yuvakkumar</b> , R. Suriyaprabha, V. Rajendran	
	Catalytic Effect of Iron Nanoparticles on Heterocyst, Protein and Chlorophyll	
	International Journal of Green Nanotechnology, Vol. 4, pp. 326–338, 2012	
<b>7</b>	R. Suriyaprabha, G. Karunakaran, <b>R. Yuvakkumar</b> , P. Prabu, V. Rajendran	
	Application of silica nanoparticles for increased silica availability in maize	
	SOLID STATE PHYSICS: Proceedings of the 57th DAE Solid State Physics Symposium 2012, AIP Conf. Proc. 1512, 424-425 (2013); doi: 10.1063/1.4791092	
<b>2011 (4)</b>		
<b>6</b>	<b>R. Yuvakkumar</b> , V. Elango, V. Rajendran, N. Kannan, P. Prabu	
	Influence of Nanosilica Powder on the Growth of Maize Crop ( <i>Zea Mays L.</i> )	
	International Journal of Green Nanotechnology: Physics and Chemistry, Vol. 3, pp. 180–190, 2011	
<b>5</b>	<b>R. Yuvakkumar</b> , V. Elango, V. Rajendran, N. Kannan	<b>1.12</b>
	Preparation and characterization of zero-valent iron nanoparticles	
	Digest Journal of Nanomaterials and Biostructures, Vol. 6, pp. 1771–1776, 2011	
<b>4</b>	<b>R. Yuvakkumar</b> , V. Elango, V. Rajendran, N. Kannan	<b>0.571</b>
	A new approach to preparing crystalline nano molybdenum particles	
	Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, Vol. 41, pp. 309–314, 2011	
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