



# Template for Evidence(s) UI GreenMetric Questionnaire

University : Karunya Institute of Technology and Sciences  
Country : India  
Web Address : www.karunya.edu

## [6] Education and Research (ED)

### [6.7] Number of scholarly publications on sustainability

The screenshot shows a Scopus search interface with 133 document results. The search query is: (AF-ID ("Karunya Institute of Technology and Sciences" 60100082)) AND (green AND sustainability) AND (LIMIT-TO (PUBYEAR, 2023) OR LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020)).

Two documents are listed:

Document title	Authors	Year	Source	Cited by
1 Development of lead-free perovskite solar cells: Opportunities, challenges, and future technologies <i>Open Access</i>	Magdalin, A.E., Nixon, P.D., Jayaseelan, E., (...), Kumar, N.M., Ananthi, N.	2023	Results in Engineering 20,101438	0
2 Microalgae and nano-cellulose composite produced via a co-culturing strategy for ammonia removal from the aqueous phase	Tseng, Y.-S., Patel, A.K., Haldar, D., (...), Dong, C.-D., Singhania, R.R.	2023	Bioresource Technology 389,129801	0

Documents by subject area:

Subject area	Documents
Engineering	52
Environmental Science	41
Materials Science	27
Energy	26
Computer Science	23
Chemical Engineering	21
Agricultural and Biological Sciences	17
Biochemistry, Genetics and Molecular Biology	10
Chemistry	9

Pie chart showing the distribution of documents by subject area:

- Engineering (18.6%)
- Environmental Science (14.6%)
- Materials Science (9.6%)
- Energy (9.3%)
- Computer Science (8.2%)
- Chemical Engineering (7.5%)
- Agricultural and Biological Sciences (6.1%)
- Biochemistry, Genetics and Molecular Biology (3.6%)
- Chemistry (3.2%)
- Immunology and Microbiology (2.5%)
- Other (16.8%)



**Description:**

Data set	Publications by SDG - Relative Activity Index								
Entity	Karunya University								
Year range	2020 to 2022								
Filtered by	not filtered								
Types of publications included	all publication types								
Self-citations	included								
Data source	Scopus								
Date last updated	18 October 2023								
Date exported	26 October 2023								
	World			India			Karunya University		
	Scholarly Output	Publication Share (%)	Relative Activity Index	Scholarly Output	Publication Share (%)	Relative Activity Index	Scholarly Output	Publication Share (%)	Relative Activity Index
All publications	11734981	100		755031	100		2504	100	
SDG 1: No Poverty (2023)	55035	0.47	1	3253	0.43	0.92	1	0.04	0.09
SDG 2: Zero Hunger (2023)	152003	1.3	1	16537	2.19	1.69	46	1.84	1.42
SDG 3: Good Health and Well-being (2023)	1980265	16.87	1	116978	15.49	0.92	344	13.74	0.81
SDG 4: Quality Education (2023)	165473	1.41	1	5177	0.69	0.49	13	0.52	0.37
SDG 5: Gender Equality (2023)	95666	0.82	1	3983	0.53	0.65	3	0.12	0.15
SDG 6: Clean Water and Sanitation (2023)	203164	1.73	1	21278	2.82	1.63	86	3.43	1.98
SDG 7: Affordable and Clean Energy (2023)	564656	4.81	1	55579	7.36	1.53	268	10.7	2.22
SDG 8: Decent Work and Economic Growth (2023)	197075	1.68	1	13972	1.85	1.1	35	1.4	0.83
SDG 9: Industry, Innovation and Infrastructure (2023)	332975	2.84	1	31278	4.14	1.46	177	7.07	2.49
SDG 10: Reduced Inequality (2023)	167794	1.43	1	5747	0.76	0.53	10	0.4	0.28
SDG 11: Sustainable Cities and Communities (2023)	267266	2.28	1	18915	2.51	1.1	105	4.19	1.84
SDG 12: Responsible Consumption and Production (2023)	176969	1.51	1	16876	2.24	1.48	76	3.04	2.01
SDG 13: Climate Action (2023)	198871	1.69	1	15380	2.04	1.2	60	2.4	1.41
SDG 14: Life Below Water (2023)	109860	0.94	1	6358	0.84	0.9	15	0.6	0.64
SDG 15: Life on Land (2023)	142774	1.22	1	10806	1.43	1.18	21	0.84	0.69
SDG 16: Peace, Justice and Strong Institutions (2023)	151472	1.29	1	4938	0.65	0.51	10	0.4	0.31

© 2023 Elsevier B.V. All rights reserved. SciVal, RELX Group and the RE symbol are trade marks of RELX Intellectual Properties SA, used under license.

Data set	Publications by SDG		
Entity	Karunya University		
Year range	2020 to 2022		
Filtered by	not filtered		
Types of publications included	all publication types		
Self-citations	included		
Data source	Scopus		
Date last updated	18 October 2023		
Date exported	26 October 2023		
Name	Scholarly Output	Field-Weighted Citation Impact	Citation Count
SDG 1: No Poverty (2023)	1	0	0
SDG 2: Zero Hunger (2023)	46	1.26	218
SDG 3: Good Health and Well-being (2023)	344	2.03	4068
SDG 4: Quality Education (2023)	13	0.71	53
SDG 5: Gender Equality (2023)	3	3.03	27
SDG 6: Clean Water and Sanitation (2023)	86	1.23	604
SDG 7: Affordable and Clean Energy (2023)	268	1.17	2024
SDG 8: Decent Work and Economic Growth (2023)	35	2.21	537
SDG 9: Industry, Innovation and Infrastructure (2023)	177	1.51	1161
SDG 10: Reduced Inequality (2023)	10	1.35	45
SDG 11: Sustainable Cities and Communities (2023)	105	2.16	1611
SDG 12: Responsible Consumption and Production (2023)	76	1.68	766
SDG 13: Climate Action (2023)	60	1.38	383
SDG 14: Life Below Water (2023)	15	1.53	112
SDG 15: Life on Land (2023)	21	0.78	82
SDG 16: Peace, Justice and Strong Institutions (2023)	10	1.23	36

© 2023 Elsevier B.V. All rights reserved. SciVal, RELX Group and the RE symbol are trade marks of RELX Intellectual Properties SA, used under license.



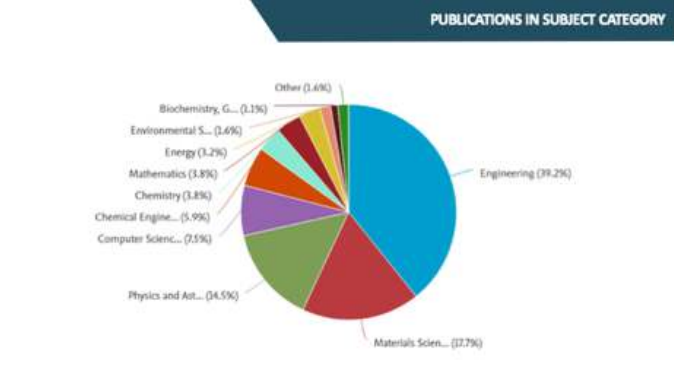
**IMPACT FACTOR 5.7**

Neurocomputing  
Volume 311, 16 October 2018, Pages 107–124

**Torque modeling of Switched Reluctance Motor using LSSVM-DE**

Highlights

- A nonparametric modeling of Switched Reluctance Motor using Least Square Support Vector Regression.
- The model has satisfactory flux-link accuracy than to optimal hyperparameters of LSSVM.
- Optimal tuning of hyperparameters of LSSVM was obtained by Differential Evolution.



**IMPACT FACTOR 5.6**

Colloids and Surfaces B: Biointerfaces  
Volume 171, 15 October 2018, Pages 40–50

**On the accessibility of surface-bound drugs on magnetic nanoparticles. Encapsulation of drugs loaded on modified dextran-coated superparamagnetic iron oxide by  $\beta$ -cyclodextrin**

Highlights

- Superparamagnetic iron oxide nanoparticles are prepared and coated with dextran.
- Drugs are loaded on the dextran-coated modified dextran shell.
- The loaded drug ions conjugate with  $\beta$ -cyclodextrin.

**IMPACT FACTOR 5.4**

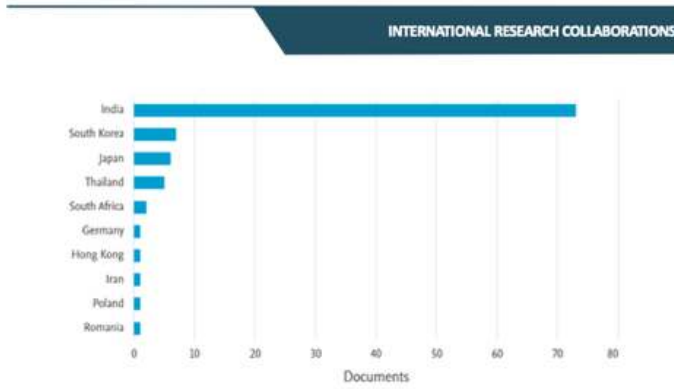
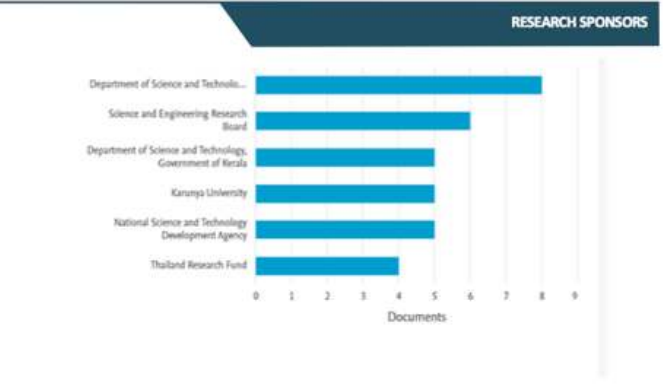
Human-centric Computing and Information Sciences

**Intelligent phishing url detection using association rule mining**

Abstract

Phishing is one of the critical security threats where a malicious webpage impersonates a legitimate webpage to steal sensitive information from the user. Mining association rules can be used for web site and phishing threat within the field of network security. This paper focuses on detecting the significant features that discriminate between legitimate and phishing URLs. These features are then employed to generate association rules and predictive model. The rules obtained are employed to highlight the features that are more prevalent in phishing URLs, thus helping the knowledge acquisition in phishing URL, and searching confidence to evaluate the features the network team security, availability of the top-level domain in the URL, and keyword within the path portion of the URL, also found to be suitable indicators for phishing URLs. In addition to the number of queries in the URL, also in the frequency of the URL, and length of the URL, are also the key factors for phishing URLs.

Keywords: Phishing, Web security, Association rule mining.



**IMPACT FACTOR 5.9**

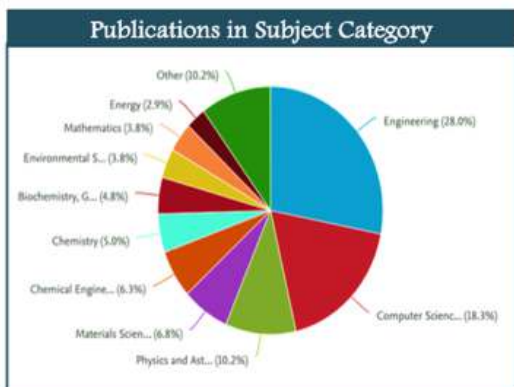
Journal of Alloys and Compounds  
Volume 441, 20 October 2018, Pages 90–92

**Designing ZnS decorated reduced graphene-oxide nanohybrid via microwave route and their application in photocatalysis**

Highlights

- ZnS decorated rGO nanohybrid materials were prepared via microwave route.
- HA-TiO<sub>2</sub> nanocomposites revealed the uniform distribution of ZnS on rGO nanohybrid.





### Impact Factor 8.001

Contents lists available at [ScopusDirect](#)

**Renewable Energy**

Journal homepage: [www.elsevier.com/locate/reneue](http://www.elsevier.com/locate/reneue)

**Assessment of SVM, empirical and ANN based solar radiation prediction models with most influencing input parameters**

R. Meenu<sup>a</sup>, A. Immanuel Selvakumar

Department of Electrical Technology, Energy Chemistry, Coimbatore, 641 014, India

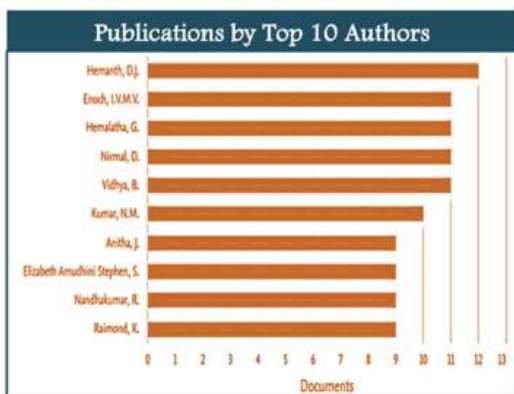
**ARTICLE INFO**

Article history:  
Received 4 July 2017  
Received in revised form 21 November 2017  
Accepted 1 December 2017  
Available online 5 December 2017

**ABSTRACT**

This paper evaluates the accuracy of Support Vector Machine (SVM), Artificial Neural Network (ANN) and empirical solar radiation models with different combination of input parameters. The parameters include month, latitude, longitude, bright sunshine hours, day length, relative humidity, maximum and minimum temperature. The models are evaluated based on statistical measures. First, some empirical models are analyzed and validated with experimental data. This work is focused on the prediction of monthly mean daily global solar radiation (GSR) for different cities in India with more influencing input parameters identified using Weibull Extension for Knowledge Discovery (WEKA) software. WEKA identifies month, latitude, maximum temperature and bright sunshine hours as the most influencing and relative humidity as the least influencing input parameters. SVM model with more influencing input parameter performs better than ANN and empirical models. Evaluation of relative humidity does not affect the prediction accuracy. Therefore this work reduces the dimensionality of the data and improves the prediction accuracy. This work also attempts to estimate the solar energy potential of each city of Tamil Nadu, India using the SVM model. The predicted annual GSR varies from 17 to 22 MJ/m<sup>2</sup>/day which is precise enough for a wide range of solar applications.

© 2017 Elsevier Ltd. All rights reserved.



### Impact Factor 7.80

ACS Sustainable Chemistry & Engineering

Photocatalytic Degradation of Rhodamine B Using Zinc Oxide Activated Charcoal Polyaniline Nanocomposite and Its Survival Assessment Using Aquatic Animal Model

S. Stepin Paul Selsin,<sup>1</sup> A. Ganesh Kumar,<sup>1</sup> L. Sarala,<sup>1</sup> R. Rajaran,<sup>1</sup> A. Sathyan,<sup>1</sup> J. Princy Melin,<sup>1</sup> and L. Sharmila Lyda<sup>2\*</sup>

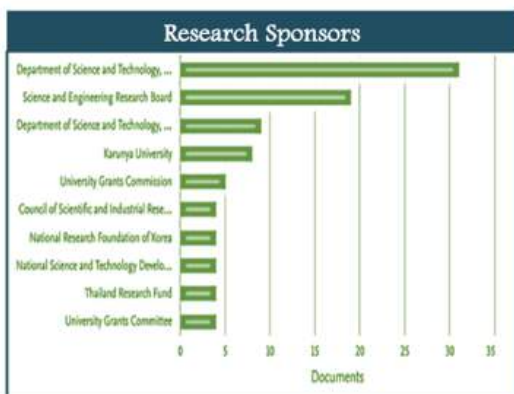
<sup>1</sup>PG and Research Department of Chemistry, Bishop Heber College, Tiruchengode 620017, Tamil Nadu, India  
<sup>2</sup>TNPS, Formulating and Marine Genomics Laboratory, Department of Marine Science, Bharathidasan University, Tiruchengode 620 024, Tamil Nadu, India

\*Strength of Materials Lab, Department of Civil Engineering, Karunya University, Coimbatore 641114, Tamil Nadu, India

Supporting Information

**ABSTRACT:** Zinc oxide activated charcoal polyaniline (ZACPF) nanocomposites were prepared using a simple precipitation method. The environmental photocatalytic was characterized by XRD, SEM, HRTEM, EDS, UV-vis, PL, XPS, and BET techniques. Results confirmed the successful incorporation of activated charcoal polyaniline (AC/PANI) on ZnO nanoparticles. The photocatalytic activity of the synthesized ZACPF was assessed by the photodegradation of Rhodamine B (RB) using visible light irradiation. The improved photocatalytic activity of the sample was attributed to the synergistic effect between AC/PANI and ZnO which effectively separates the electron hole pair on the formation of PANI and ZnO. Survival assessment was carried out using Artemia salina (AS) to determine the detoxification potential of the degraded products. In survival assessment, treated dye solution exhibited less toxic effect when compared to the untreated dye solution. A mechanism was also proposed for the degradation of RB dye using ZACPF under visible light irradiation.

**KEYWORDS:** Rhodamine B; Nanocomposites; Photocatalysis; Artemia salina; Survival assessment



### Impact Factor 8.928

ChemSusChem, 2018 Nov 23;11(23):3911-3916. doi: 10.1002/cssc.201801443. Epub 2018 Nov 5.

**Ni-Catalyzed  $\alpha$ -Alkylation of Unactivated Amides and Esters with Alcohols by Hydrogen Auto-Transfer Strategy**

Siba P. Malya,<sup>1</sup> Jagannath Rana,<sup>1</sup> Jayaraman Pitchaimani,<sup>2</sup> Avanashiappan Nandakumar,<sup>3</sup> Vedhni Madhu,<sup>2</sup> Ekambaram Balaraman<sup>2</sup>

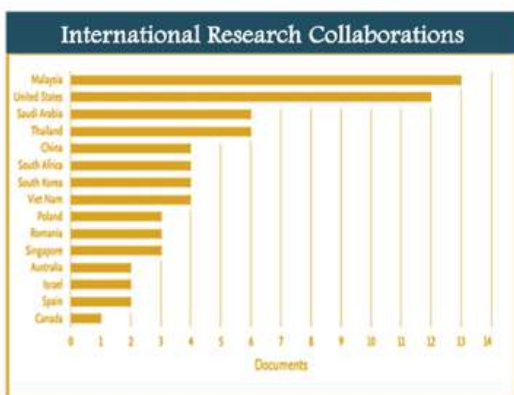
Affiliations + expand  
PMID: 30284756 DOI: 10.1002/cssc.201801443

**Abstract**

A transition-metal-catalyzed borrowing hydrogen/hydrogen auto-transfer strategy allows the utilization of feedstock alcohols as an alkylating partner, which avoids the formation of stoichiometric salt waste and enables a direct and benign approach for the construction of C-N and C-C bonds. In this study, a nickel-catalyzed  $\alpha$ -alkylation of unactivated amides and ester (tert-butyl acetate) is carried out by using primary alcohols under mild conditions. This C-C bond-forming reaction is catalyzed by a new, molecularly defined nickel(II) NPN-pincer complex (D-1-1 mol %) and proceeds through hydrogen auto-transfer, thereby releasing water as the sole byproduct. In addition, N-alkylation of cyclic amides under Ni-catalytic conditions is demonstrated.

**Keywords:** alkylation; amides; homogeneous catalysis; hydrogen transfer; nickel.

© 2018 Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.



### Impact Factor 6.953

Contents lists available at [ScopusDirect](#)

**International Journal of Biological Macromolecules**

Journal homepage: [www.elsevier.com/locate/ijbiomac](http://www.elsevier.com/locate/ijbiomac)

**Optimized extraction and characterization of pectin from jackfruit (*Artocarpus integer*) wastes using response surface methodology**

Antony Alwyn Sundaraj,<sup>1</sup> Thiaman Vasudevan Ranganathan<sup>2,\*</sup>, Srinivasulu Gubirathinai<sup>3</sup>

<sup>1</sup>Department of Food Processing and Engineering, Anna University, Coimbatore - 641 014, Tamil Nadu, India  
<sup>2</sup>Department of Food Processing and Engineering, Anna University, Coimbatore - 641 014, Tamil Nadu, India  
<sup>3</sup>Department of Food Processing and Engineering, Anna University, Coimbatore - 641 014, Tamil Nadu, India

**ARTICLE INFO**

Article history:  
Received 16 March 2017  
Received in revised form 21 July 2017  
Accepted 11 August 2017  
Available online 11 August 2017

**ABSTRACT**

The present study was initiated to experimentally optimize the conditions for extraction using Central Composite Design. The optimum temperature and time for the extraction of pectin from jackfruit wastes using acetic acid were found to be 90 °C and 180 min, respectively. The yield of pectin under these optimum conditions was 39.47%. Extraction time and temperature showed a significant ( $p < 0.05$ ) effect on the pectin yield. The optimal yield of the experimental work of 39.47% of pectin, under similar conditions. Experimental studies on a large scale using 10 kg of jackfruit wastes, gave a yield of 39.5% pectin. Pectin isolated from jackfruit wastes can be classified as low methoxyl pectin with promising applications in food sugar products.

© 2017 Elsevier B.V. All rights reserved.



**IMPACT FACTOR 9.229**

7 ACS Appl Mater Interfaces, 2018, Vol. 10, Issue 23, 2317-2327, doi: 10.1021/acsami.8b19625, 2018-2019, 1st

**A Stretchable Strain-Insensitive Temperature Sensor Based on Free-Standing Elastomeric Composite Fibers for On-Body Monitoring of Skin Temperature**

Yan-Guang Tang, Yi-Hy Lim, Dong-Y. Suh, Subramanian Aravamudan, Pham Van Ho

Tang, Yan-Guang \* [View ORCID](#)  
 PNAS 10571084, DOI: 10.1073/pnas.1801940115

**Abstract**

To realize the potential applications of stretchable sensors in the field of wearable health monitoring, it is essential to develop a stable sensing device with robust electrical and mechanical properties in the presence of varying external conditions. Herein, we demonstrate a stretchable temperature sensor with the elimination of strain-induced interference via geometric engineering of the free-standing stretchable fibers (FSFs) of reduced graphene oxide (polyurethane composite). The FSFs were formed in serpentine structures and enabled the implementation of a strain-insensitive stretchable temperature sensor. On the basis of the controlled reduction time of graphene oxide, we can modulate the response and thermal index of the device. These results are attributed to the variation in the density of oxygen-containing functional groups in the FSFs, which affect the hopping charge transport and thermal generation of exciton carriers. The FSF temperature sensor yields increased sensitivity (0.85%/°C), stretchability (30%), sensing resolution (0.1 °C), and stability in response to applied stretching (±0.57 °C for strains ranging from 0 to 50%). When the sensor is worn onto a stretchable bandage and attached to the human body, it can detect the temperature changes of the human skin during different body motions in a continuous and stable manner.

**3 GOOD HEALTH AND WELL-BEING**



**IMPACT FACTOR 9.078**

Composites Part B: Engineering, Volume 167, February 2019, Pages 422-430

**Influence of machining parameters on wire electrical discharge machining performance of reduced graphene oxide/magnesium composite and its surface integrity characteristics**

V. Koushanfar, F. M. A. Saeed, P. J. Stangor, M. You, Y. Zhou, S. H. Lee

[View ORCID](#)  
 Add to Reading, Share, Cite

[https://doi.org/10.1016/j.compositesb.2018.10.021](#) [View full text](#)

**Abstract**

Taguchi orthogonal grey relation analysis is adopted to study the effects of machining parameters of Wire Electrical Discharge Machining (WEDM) on response variables: surface roughness, material removal rate, and surface integrity characteristics. The optimal combinations of process parameters were expected to be finalized in this research to obtain maximum Material Removal Rate (MRR) with a minimal surface roughness.



**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**



**IMPACT FACTOR 6.725**

Applied Soft Computing, Volume 15, February 2015, Pages 22-28

**Modified Genetic Algorithm approaches for classification of abnormal Magnetic Resonance Brain tumour images**

H. J. Park, H. J. Park, J. H. Park

[View ORCID](#)  
 Add to Reading, Share, Cite

[https://doi.org/10.1016/j.asoc.2014.10.004](#) [View full text](#)

**Highlights**

- Three different modified Genetic Algorithm approaches are proposed in this work for feature selection.
- These approaches are used for Magnetic Resonance brain image classification.

**3 GOOD HEALTH AND WELL-BEING**



**IMPACT FACTOR 6.609**

Fuel, Volume 121, 1 February 2015, Pages 2023-2029

**Multi-response optimization to improve the performance and emissions level of a diesel engine fueled with ZnO incorporated water emulsified soybean biodiesel/diesel fuel blends**

Saeed M. Hassan, F. M. A. Saeed, Anwarul H. Khan, F. H. Khan, Ch. Srinivas Reddy

[View ORCID](#)  
 Add to Reading, Share, Cite

[https://doi.org/10.1016/j.fuel.2014.10.017](#) [View full text](#)

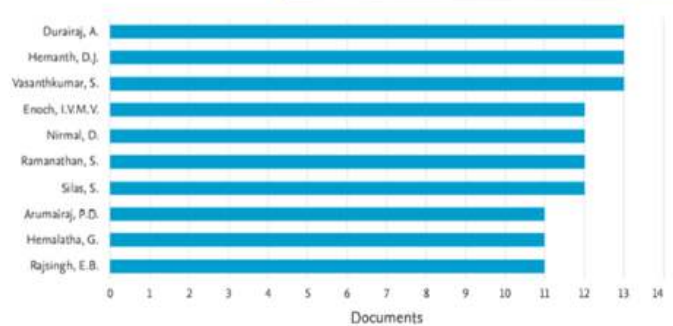
**Highlights**

- Multi response optimization tool is applied to find the optimal condition.

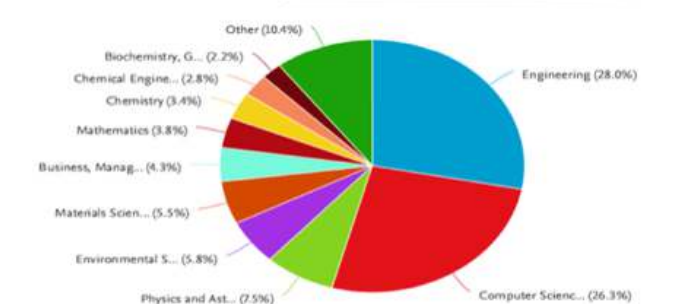


**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

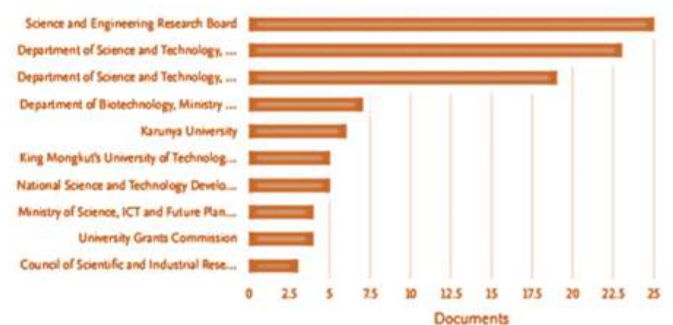
**PUBLICATIONS BY TOP 10 AUTHORS**



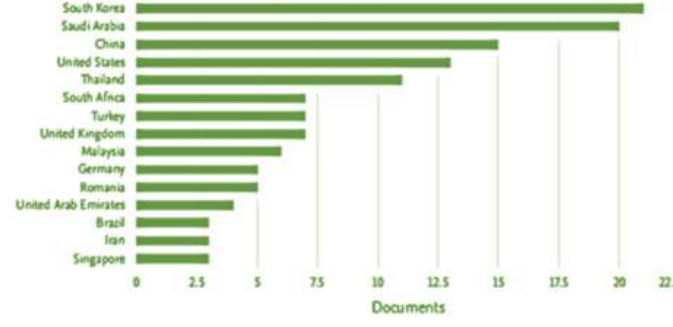
**PUBLICATIONS IN SUBJECT CATEGORY**



**RESEARCH SPONSORS**



**INTERNATIONAL RESEARCH COLLABORATIONS**





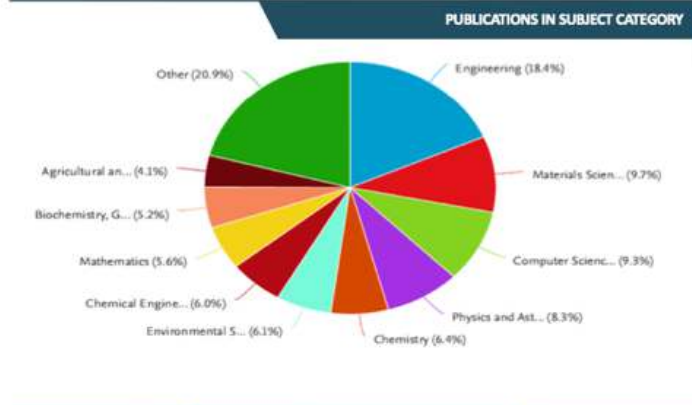
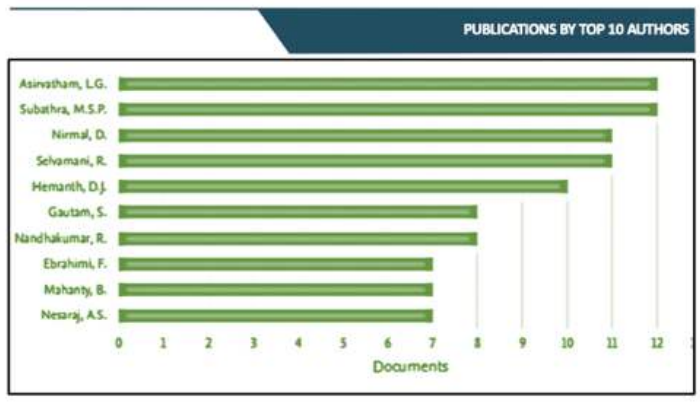
**IMPACT FACTOR 5.816**

**Comparative studies on hierarchical flower like Cu<sub>2</sub>XSn<sub>2</sub>S<sub>4</sub>X= Zn, Ni, Mn & Co<sub>2</sub> quaternary semiconductor for electrocatalytic and photocatalytic applications**

I. Shreika<sup>1</sup>, V. Venkatesh<sup>2</sup>, J. Jayaram<sup>3</sup>, V. Mahesh Kumar<sup>4</sup>, A. Subrahmanya<sup>5</sup>, B. Vignya<sup>6</sup>

<sup>1</sup>Department of Physics, Government College of Engineering and Technology, Chittoor, Andhra Pradesh, India  
<sup>2</sup>Department of Chemistry, Government College of Engineering and Technology, Chittoor, Andhra Pradesh, India  
<sup>3</sup>Department of Physics, Government College of Engineering and Technology, Chittoor, Andhra Pradesh, India  
<sup>4</sup>Department of Physics, Government College of Engineering and Technology, Chittoor, Andhra Pradesh, India  
<sup>5</sup>Department of Physics, Government College of Engineering and Technology, Chittoor, Andhra Pradesh, India  
<sup>6</sup>Department of Physics, Government College of Engineering and Technology, Chittoor, Andhra Pradesh, India

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**



**IMPACT FACTOR 5.647**

**Water quality parameters as indicators to study the interactions of nanoparticles in an aquatic environment**

Agarwal Palakshy<sup>1</sup>, Pruthi Gaur<sup>2</sup>, Rishi Tiwari<sup>3</sup>, Prakash Kumar<sup>4</sup>, Subramanian Rajan<sup>5</sup>

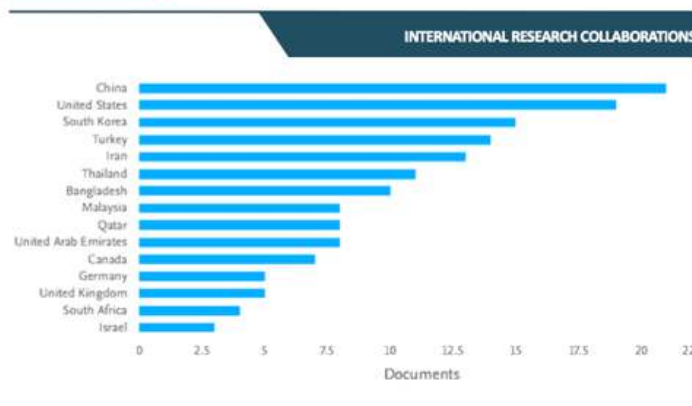
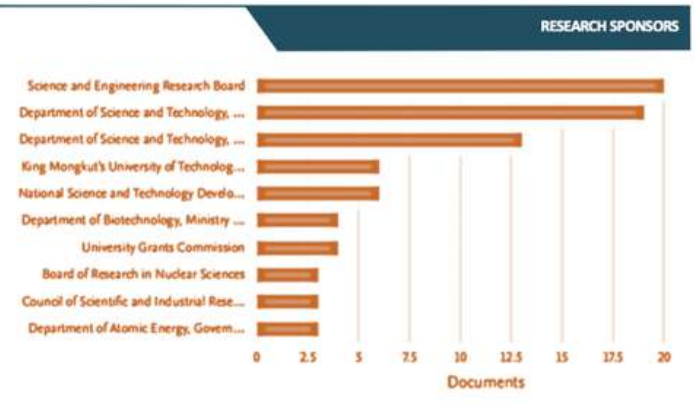
**6 CLEAN WATER AND SANITATION**

**IMPACT FACTOR 5.4**

**An enhanced diabetic retinopathy detection and classification approach using deep convolutional neural network**

S. Subrahmanya, S. Venkatesh & S. Vignya<sup>1</sup>

**3 GOOD HEALTH AND WELL-BEING**



**IMPACT FACTOR 5.468**

**Adaptive Cuckoo Search based optimal bilateral filtering for denoising of satellite images**

Arjo Anjan, J. Anitha<sup>1</sup>

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

Source: SCOPUS