

Annual Research & Community Service Report (2023)

Introduction:

Electrical Engineering Department is committed to conduct profound research that contributes to the advancement of engineering knowledge and engineering practices. The department encourages its faculty members to produce intellectual contributions of high quality. The department schedules the workload in such a way that each faculty member could have more time to be used for scholarly activities. The department recognizes the intellectual contributions by its faculty members that create new knowledge, strengthen its scholarly environment, or find practical solutions to industry and community-related problems. In addition, the department encourages research collaboration and dissemination of research interest among its faculty members. Financial and technical support, internally and externally, are made available and easily accessible to the department faculty.

The electrical engineering program chair has established a Scientific Research and Community Service Committee to plan, execute and manage the research activities in the department. The committee members are listed in Table 1.

Table 1. Scientific Research and Community Service Committee

Committee Members	Role
Dr. Ahmad Alzahrani	Committee Head
Dr. Muhammad Irfan	Member
Dr. Mohammed Jalalah	Member

The Program Research Mission:

To develop a research culture in the department and to contribute to the society in establishing knowledge-based economy.

The Program Research Objectives:

- Contribution to building a knowledge-based society, and assistance to the priorities of industry and economic growth in the Kingdom.
- Develop and support a more active research culture at the department.
- Discover and innovate through high quality competitive research in electrical engineering.
- Establish national and international partnerships and develop collaborative projects within NU and with external academic and industrial partners.
- Contributing to the community service through organizing technical seminars and workshops.

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Research Directions:

The department has identified eight areas for fundamental and applied research. These research areas are identified keeping in view the Vision 2030 of the Kingdom.

- Renewable Energy
- Stability of Power Systems
- Modernization of Power Grid
- Communications and Internet of things
- NANO technology and MEMS
- Cognitive Radio and Emerging Technologies
- Image Processing and Multimedia Communications
- Artificial Intelligence and Machine Learning

Research Facilities:

The department has the state of the art laboratories to conduct the research. The list of the laboratories are given below:

- Renewable Energy Lab
- National Instruments Hardware and Software Set-Up
- Power Machines Lab
- Control Lab
- Circuits Lab
- Communication Lab

Mapping of EE Research KPIs with NU KPIs

The EE KPIs related research have been mapped with the KPIs of the Najran University KSA. The mapping table has been given below.

Research KPIs of the University Research KPIs of EE	S10.2 Number of citations in refereed journals in the previous year per full time equivalent faculty members	S10.3 Proportion of full time member of teaching staff with at least one refereed publication during the previous year
KPI-P-16 Citations rate in refereed journals per faculty member	√	
KPI-P-15 Rate of published research per faculty member		√
KPI-P-14 Percentage of publications of faculty members		√

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Research Publications in Academic Year 2023:

The EE faculty members have published **254 papers** in various peer-reviewed, Web of Science journals. The total number of Ph.D faculty members in the department is 16. The main reason for the high number of publications is the research collaboration funding programs sponsored by the Deanship of Scientific Research, Najran University. Also, some of the faculty members have secured funds from the Institutional Funding Program of the Ministry of Education, Saudi Arabia.

The journal publications list has been given in Table 2 and the analysis has been given in Table 3.

Table 2. Journal Publication in 2023 (01 January 2023 to 31 December 2023)

No.	Article Title	Authors	Journal Title	Ranking	Impact factor (As per JCR)
1	Flexible cementite/ferroferic oxide/silicon dioxide/carbon nanofibers composite membrane with low-frequency dispersion weakly negative permittivity	Mingxiang Liu, Han Wu, Yingjie Wang, Juanna Ren, Dalal A Alshammari, Hassan E Abd Elsalam, Islam H El Azab, Hassan Algadi, Peitao Xie, Yao Liu	Advanced Composites and Hybrid Materials	Q1	20.1
2	An overview of bi-layered niobium pentoxide (Nb ₂ O ₅)-based photoanodes for dye-sensitized solar cells	Xianyun Gong, Niyamat I Beedri, Manal F Abou Taleb, Mohamed M Ibrahim, Suhail AAR Sayyed, Habib M Pathan, Hua Hou, Hassan Algadi, Sunita Salunke-Gawali, Yong Ma	Advanced Composites and Hybrid Materials	Q1	20.1
3	Improved passivation and anticorrosion behaviors of selective laser melted Inconel 718 alloy in acidic solutions	Yanxin Qiao, Wentao Zhang, Najla AlMasoud, Xinwang Shen, Shunli Zheng, Taghrid S Alomar, Zeinhom M El-Bahy, Mohamed M Ibrahim, Hassan Algadi, Wen Liu	Advanced Composites and Hybrid Materials	Q1	20.1
4	Activation of inert triethylene tetramine-cured epoxy by sub-critical water decomposition	Xianyun Gong, Yuyan Liu, Mohamed M Ibrahim, Hongkun Zhang, Mohammed A Amin, Yong Ma, Ben Bin Xu, Hassan Algadi, Priyanka Wasnik, Zeinhom M El-Bahy, Zhanhu Guo	Reactive and Functional Polymers	SCOPUS	5.1
5	Initiating binary metal oxides microcubes electromagnetic wave absorber toward ultrabroad absorption bandwidth through interfacial and defects modulation	Fushan Li, Nannan Wu, Hideo Kimura, Yuan Wang, Ben Bin Xu, Ding Wang, Yifan Li, Hassan Algadi, Zhanhu Guo, Wei Du, Chuanxin Hou	Nano-Micro Letters	Q1	26.6
6	Boron and fluorine Co-doped laser-induced graphene towards high-performance micro-supercapacitors	Guanying Yuan, Tong Wan, Amal BaQais, Yirui Mu, Dapeng Cui, Mohammed A	Carbon	Q1	10.9

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		Amin, Xiaodong Li, Ben Bin Xu, Xiaohan Zhu, Hassan Algadi, Handong Li, Priyanka Wasnik, Na Lu, Zhanhu Guo, Huige Wei, Bowen Cheng			
7	Electrochemical aptasensor based on gold nanoparticle decorated Ti3C2Tx nanocomposites for chloramphenicol detection	Xueying Yang, Wenjuan Guo, Ahmad Umar, Hassan Algadi, Ahmed A Ibrahim, Chengxian Zhao, Zhe Ren, Luyan Wang, Meishan Pei	Microchimica Acta	Q1	5.7
8	Polysaccharide extraction optimization, monosaccharide composition, and antioxidant activity analysis of different varieties of Gastrodia elata BI aerial parts	Chunjiang Du, Xiangyi Liu, Hassan Algadi, Ying Hou, Xiaona Fu, Handong Li, Jincheng Fan, Man Vir Singh, Yunxian Li, Xingmao Zhang, Juan Xu, Zhanhu Guo	Biomass Conversion and Biorefinery	Q2	4
9	Polyethylene glycol embedded reduced graphene oxide supramolecular assemblies for enhanced room-temperature gas sensors	Ahmad Umar, Rajesh Kumar, Pravin S More, Ahmed A Ibrahim, Hassan Algadi, Mohsen A Alhamami, Sotirios Baskoutas, Sheikh Akbar	Environmental Research	Q1	8.3
10	Constructing a continuous reduced graphene oxide network in porous plant fiber sponge for highly compressible and sensitive piezoresistive sensors	Gang Zhao, Feng Qian, Xinyi Li, Yuhan Tang, Ye Sheng, Handong Li, Jiuping Rao, Man Vir Singh, Hassan Algadi, Min Niu, Weijie Zhang, Zhanhu Guo, Xiangfang Peng, Tingjie Chen	Advanced Composites and Hybrid Materials	Q1	20.1
11	Hierarchical copper oxide@ nickel-cobalt layered double hydroxide for efficient 5-hydroxymethylfurfural electro-oxidation in alkaline seawater	Sijia Guo, Min Ma, Ruixiang Ge, Hassan Algadi, Qian Shao	Advanced Composites and Hybrid Materials	Q1	20.1
12	Bamboo fiber strengthened poly (lactic acid) composites with enhanced interfacial compatibility through a multi-layered coating of synergistic treatment strategy	Binqi Fei, Dawei Wang, Najla AlMasoud, Haiyan Yang, Jing Yang, Taghrid S Alomar, Buapan Puangsin, Ben Bin Xu, Hassan Algadi, Zeinhom M El-Bahy, Zhanhu Guo, Zhengjun Shi	International Journal of Biological Macromolecules	Q1	8.2
13	Z-scheme MIL-125 (Ti)@ Graphene Oxide composite photocatalysts with enhanced photocatalytic activity and stability for Tetracycline degradation	Jijun Tang, Guicheng Gao, Weiqi Luo, Qiuyang Dai, Yuchen Wang, Hala A Elzilal, Hala M Abo-Dief, Hassan Algadi, Jiaoxia Zhang	Advanced Composites and Hybrid Materials	Q1	20.1

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14	High-entropy CoCrFeMnNi/B2 structure aluminide-laminated composites with enhanced mechanical properties	Yu Wang, Xiangfei Peng, Ahmed M Fallatah, Hongxing Qin, Wenjuan Zhao, Zaki I Zaki, Hong Xu, Bin Liu, Hongkui Mao, M El-Bahy, Hassan Algadi, Chao Wang	Advanced Composites and Hybrid Materials		20.1
15	Synthesis, characterization, antifungal properties of quaternary ammonium salts derived from natural rosin	Yanran Xu, Yanfei Niu, Chunhua Wu, Jia Yan, Xiaoping Rao, Zhengjun Shi, Kaimeng Xu, Hassan Algadi, Zhanhu Guo	Biomass Conversion and Biorefinery	Q2	4
16	Electrophoretically deposited "rigid-flexible" hybrid graphene oxide-polyethyleneimine on carbon fibers for synergistically reinforced epoxy nanocomposites	Xiaoyu Li, Peng Chen, Xiaolu Sun, Najla AlMasoud, Caifeng Wang, Taghrid S Alomar, Hassan Algadi, Bin Sun, Zhaolong Lian, Xingkui Guo	Advanced Composites and Hybrid Materials	Q1	20.1
17	Silica binary hybrid particles based on reduced graphene oxide for natural rubber composites with enhanced thermal conductivity and mechanical properties	Xinyu Liu, Xiaohui Lv, Qingfeng Tian, Najla AlMasoud, Yanfang Xu, Taghrid S Alomar, Zeinhom M El-Bahy, Jiantong Li, Hassan Algadi, Gourisankar Roymahapatra, Tao Ding, Jiang Guo, Xiaohong Li	Advanced Composites and Hybrid Materials	Q1	20.1
18	Iron-material-facilitated methane production from anaerobic wastewater treatment	Ying Wang, Jichun He, Ben Bin Xu, Nahid A Osman, Hassan Algadi, Hala M Abo-Dief, Na Lu, Priyanka Wasnik, Deepak Sridhar, Abdullah K Alanazi, Qinglong Jiang, Bin Qiu, Zhanhu Guo	Emerging Materials Research	Q4	2.2
19	Overview of biomass valorization: Case study of nanocarbons, biofuels and their derivatives	Jianchen Cai, Shaohua Xi, Ce Zhang, Xu Li, Mohamed H Helal, Zeinhom M El-Bahy, Mohamed M Ibrahim, Haoyu Zhu, Man Vir Singh, Priyanka Wasnik, Ben Bin Xu, Zhanhu Guo, Hassan Algadi, Jiang Guo	Journal of Agriculture and Food Research	Emerging SCI	3.8
20	High adsorption performance for trace lead (II) cation from sewage by Fe/Cu metal organic nanosheets modified with terephthalic acid	Xiaofeng Shi, Lingshu Gao, Eman Alzahrani, Junmao Hong, Abdullah K Alanazi, Hala M Abo-Dief, Junhua Li, Ben Bin Xu, Hassan Algadi,	Chemosphere	Q1	8.8

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		Zeinhom M El-Bahy, Zhanhu Guo			
21	Effective three-dimensional thermal conductivity networks in polystyrene/multi-walled carbon nanotubes/aluminum oxide@hexagonal boron nitride composites based on synergistic effects and isolated structures	Zhengfang Wang, Zijian Wu, Najla AlMasoud, Ling Weng, Taghrid S Alomar, Zeinhom M El-Bahy, Mingpeng He, Changjie Yang, Mingqi Sun, Priyanka Wasnik, Handong Li, Hassan Algadi, Sri Hari Kumar Annamareddy, Deepak Sridhar	Advanced Composites and Hybrid Materials	Q1	20.1
22	Progress in machining-induced residual stress and microstructural evolution of inhomogeneous materials and composites	Xiangning Zhang, Mengyao Dong, Xin Cai, Duoli Chen, Yong Xian, Xingyuan Zheng, Zhanhu Guo, Hassan Algadi	Advanced Composites and Hybrid Materials	Q1	20.1
23	Highly efficient tunable terahertz all-dielectric metasurface absorber based on high mode	Song Gao, Jianchun Xu, Jinqing Cao, Huiming Yao, S Eltahir Ali, Hala M Abo-Dief, Abdullah K Alanazi, Chuwen Lan, Hassan Algadi, Xiaojun Zhai	Advanced Composites and Hybrid Materials	Q1	20.1
24	A high-performance self-powered photodetector based on solution-processed nitrogen-doped graphene quantum dots/all-inorganic perovskite heterostructures	Hassan Algadi, Junna Ren, Asmma Alqarni	Advanced Composites and Hybrid Materials	Q1	20.1
25	Lignin in situ self-assembly facilitates biomimetic multiphase structure for fabricating ultra-strong and tough ionic conductors for wearable pressure and strain sensors	Xinyu Wang, Yi Shen, Shijian Xu, Caoxing Huang, Chenhuan Lai, Qiang Yong, Fuxiang Chu, Hassan Algadi, Daihui Zhang, Chuanwei Lu, Jifu Wang	Advanced Composites and Hybrid Materials	Q1	20.1
26	Sodium alginate reinforced polyacrylamide/xanthan gum double network ionic hydrogels for stress sensing and self-powered wearable device applications	Tuo Li, Huige Wei, Yingying Zhang, Tong Wan, Dapeng Cui, Shixiang Zhao, Teng Zhang, Yanxiu Ji, Hassan Algadi, Zhanhu Guo, Liqiang Chu, Bowen Cheng	Carbohydrate Polymers	Q1	11.2
27	An overview of metal-organic frameworks and their magnetic composites for the removal of pollutants	Chuanjin Wang, Xinlong Liu, Tianhang Yang, Deepak Sridhar, Hassan Algadi, Ben Bin Xu, Zeinhom M El-Bahy, Handong Li, Yong Ma, Tingxi Li, Zhanhu Guo	Separation and Purification Technology	Q1	8.6
28	Perfluorosulfonic acid proton exchange membrane with double proton site side	Hongyun Tan, Shengqiu Zhao, S Eltahir Ali, Shuhong Zheng, Abdullah K Alanazi,	Journal of Materials Science & Technology	Q1	10.9

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	chain for high-performance fuel cells at low humidity	Rui Wang, Haining Zhang, Hala M Abo-Dief, Ben Bin Xu, Hassan Algadi, Handong Li, Priyanka Wasnik, Zhanhu Guo, Haolin Tang			
29	Correction: Effective three-dimensional thermal conductivity networks in polystyrene/multi-walled carbon nanotubes/aluminum oxide@hexagonal boron nitride composites based on synergistic effects and isolated structures	Zhengfang Wang, Zijian Wu, Najla AlMasoud, Ling Weng, Taghrid S Alomar, Zeinhom M El-Bahy, Mingpeng He, Changjie Yang, Mingqi Sun, Priyanka Wasnik, Handong Li, Hassan Algadi, Sri Hari Kumar Annamareddy, Deepak Sridhar	Advanced Composites and Hybrid Materials	Q1	20.1
30	High-performance flexible all-solid-state asymmetric supercapacitors based on binder-free MXene/cellulose nanofiber anode and carbon cloth/polyaniline cathode	Xiaoyu Bi, Meichun Li, Guoqiang Zhou, Chaozheng Liu, Runzhou Huang, Yang Shi, Ben Bin Xu, Zhanhu Guo, Wei Fan, Hassan Algadi, Shengbo Ge	Nano Research	Q1	9.9
31	Fluorine-phosphate copolymerization waterborne acrylic resin coating with enhanced anticorrosive performance	Fengjun Gao, Yan Liu, Cuiyan Jiao, Salah M El-Bahy, Qian Shao, Zeinhom M El-Bahy, Handong Li, Priyanka Wasnik, Hassan Algadi, Ben Bin Xu, Ning Wang, Yihui Yuan, Zhanhu Guo	Journal of Polymer Science	Q2	3.4
32	Solution-processed nitrogen-doped graphene quantum dots/perovskite composite heterojunction for boosting performance of anatase titanium dioxide (TiO ₂)-based UV photodetector	Hassan Algadi, Junna Ren, Asmma Alqarni	Advanced Composites and Hybrid Materials	Q1	20.1
33	Compatibilizing and toughening blends of recycled acrylonitrile-butadiene-styrene/recycled high impact polystyrene blends via styrene-butadiene-glycidyl methacrylate terpolymer	Xiangning Meng, Yingchun Li, Najla AlMasoud, Wensheng Wang, Taghrid S Alomar, Jie Li, Xinming Ye, Hassan Algadi, Ilwoo Seok, Handong Li, Ben Bin Xu, Na Lu, Zeinhom M El-Bahy, Zhanhu Guo	Polymer	Q1	4.6
34	Boosted lithium storage performance by local build-in electric field derived by oxygen vacancies in 3D holey N-doped carbon structure decorated with molybdenum dioxide	Chuanxin Hou, Wenyue Yang, Hideo Kimura, Xiubo Xie, Xiaoyu Zhang, Xueqin Sun, Zhipeng Yu, Xiaoyang Yang, Yuping Zhang, Bin	Journal of Materials Science & Technology	Q1	10.9

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		Wang, Ben Bin Xu, Deepak Sridhar, Hassan Algadi, Zhanhu Guo, Wei Du			
35	High-entropy CoCrFeMnNi alloy/aluminide-laminated composites with enhanced quasi-static bending and dynamic compression properties	Yu Wang, Xiangfei Peng, Ahmed M Fallatah, Hongxin Qin, Wenjuan Zhao, Zaki I Zaki, Hong Xu, Bin Liu, Hongkui Mao, Zeinhom M El-Bahy, Hassan Algadi, Chao Wang	Advanced Composites and Hybrid Materials	Q1	20.1
36	Lead-free and wearing comfort 3D composite fiber-needled fabric for highly efficient X-ray shielding	Weiting Wang, Yang Liu, Shixiong Li, Kai Dong, Shujuan Wang, Puning Cai, Lin Hou, Hao Dou, Dong Liang, Hassan Algadi, Wei Fan	Advanced Composites and Hybrid Materials	Q1	20.1
37	Interfacial interaction enhancement between biodegradable poly (butylene adipate-co-terephthalate) and microcrystalline cellulose based on covalent bond for improving puncture, tearing, and enzymatic degradation properties	Zhimao Li, Can Wang, Tong Liu, Xinming Ye, Maoyong He, Libin Zhao, Handong Li, Junna Ren, Hassan Algadi, Yingchun Li, Qinglong Jiang, Ziqiang Shao	Advanced Composites and Hybrid Materials	Q1	20.1
38	Ammonium perchlorate@ graphene oxide/Cu-MOF composites for efficiently catalyzing the thermal decomposition of ammonium perchlorate	Taixin Liang, Xuejun Yang, Bo Liu, Ruidong Song, Fei Xiao, Yajun Yang, Dong Wang, Mengyao Dong, Junna Ren, Ben Bin Xu, Hassan Algadi, Yuanyuan Yang	Advanced Composites and Hybrid Materials	Q1	20.1
39	Nitrogen-doped graphite-like carbon derived from phthalonitrile resin with controllable negative magnetoresistance and negative permittivity	Junling Zeng, Wenhao Xie, Heng Zhou, Tong Zhao, Ben Bin Xu, Qinglong Jiang, Hassan Algadi, Zhenyu Zhou, Hongbo Gu	Advanced Composites and Hybrid Materials	Q1	20.1
40	Flexible Strain Sensor Enabled by Carbon Nanotubes-Decorated Electrospun TPU Membrane for Human Motion Monitoring	Xin Yu, Zijian Wu, Ling Weng, Dawei Jiang, Hassan Algadi, Zhuofan Qin, Zhanhu Guo, Ben Bin Xu	Advanced Materials Interfaces	Q2	5.4
41	Chemical composition, pharmacodynamic activity of processed Aconitum brachypodium Diels., and molecular docking analysis of its active target	Yanfei Niu, Xiaohui Li, Chunhua Wu, Zhengjun Shi, Xu Lin, HassabAlla MA Mahmoud, Einas MA Widaa, Hassan Algadi, Ben Bin Xu, Zhe Wang	Advanced Composites and Hybrid Materials	Q1	20.1

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42	Buried-in interface with two-terminal functional groups for perovskite-based photovoltaic solar cells	Zhenhua Xu, Xinming Zhou, Xiaohui Li, Handong Li, Hassan Algadi, Putao Zhang	Advanced Composites and Hybrid Materials	Q1	20.1
43	Effective Three-dimensional Thermal Conductivity Networks in Polystyrene/Multi-walled Carbon Nanotubes/Al ₂ O ₃ @ h-BN Composites Based on Synergistic Effects and Isolated Structures	Zhengfang Wang, Zijian Wu, Changjie Yang, Mingqi Sun, Ling Weng, Priyanka Wasnik, Handong Li, Hassan Algadi, Sri Hari Kumar Annamareddy, Deepak Sridhar	Advanced Composites and Hybrid Materials	Q1	20.1
44	Rapid and facile fabrication of hierarchically porous graphene aerogel for oil-water separation and piezoresistive sensing applications	Yirui Mu, Lin Wang, Rui Zhang, Rami Adel Pashameah, Eman Alzahrani, Zhengzheng Li, Abdullah K Alanazi, Hassan Algadi, Mina Huang, Zhanhu Guo, Tong Wan, Huige Wei	Applied Surface Science	Q1	6.7
45	Waterwheel-inspired high-performance hybrid electromagnetic-triboelectric nanogenerators based on fluid pipeline energy harvesting for power supply systems and data monitoring	Mengying Lian, Jiaxin Sun, Dawei Jiang, Miaojun Xu, Zijian Wu, Ben Bin Xu, Hassan Algadi, Mina Huang, Zhanhu Guo	Nanotechnology	Q2	3.5
46	Constructing iron-group doped metal-organic framework films on hematite photoanodes for efficient solar water splitting	Xiu-Shuang Xing, Xuyang Zeng, Zhongyuan Zhou, Zeinhom M El-Bahy, Mohamed H Helal, Qianyu Gao, Hassan Algadi, Peilin Song, Xuzhao Liu, Xinru Zhang, Jimin Du	Advanced Composites and Hybrid Materials	Q1	20.1
47	Graphene oxide-supported Cu/Co nanocatalysts for thermal decomposition of ammonium perchlorate composites	Taixin Liang, Ruidong Song, Chong Chen, Taghrid S Alomar, Fei Xiao, Najla AlMasoud, Zeinhom M El-Bahy, Yuanyuan Yang, Hassan Algadi, Lufeng Sun	Advanced Composites and Hybrid Materials	Q1	20.1
48	Mechanically-robust electrospun nanocomposite fiber membranes for oil and water separation	Marat Nueraji, Zhexenbek Toktarbay, Aida Ardakzyzy, Deepak Sridhar, Hassan Algadi, Ben Bin Xu, Jalal T Althakafy, Abdullah K Alanazi, Hala M Abo-Dief, Salimgerey Adilov, Zhanhu Guo	Environmental Research	Q1	8.3
49	Influence of mass ratio and calcination temperature on physical and photoelectrochemical properties of ZnFe-	Yufei Zhang, Junjie Zheng, Jiejie Nan, Chengjie Gai, Qian Shao, Vignesh Murugadoss,	Particuology	Q3	3.5

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	layered double oxide/cobalt oxide heterojunction semiconductor for dye degradation applications	Srihari Maganti, Nithesh Naik, Hassan Algadi, Mina Huang, Ben Bin Xu, Zhanhu Guo			
50	High-performance lead-free perovskite solar cell: a theoretical study	Ahmad Umar, Pranjal Srivastava, Sadanand, Shambhavi Rai, Pooja Lohia, Dilip Kumar Dwivedi, Hassan Algadi, Sotirios Baskoutas	Emerging Materials Research	Q4	2.2
51	Tellurium intervened Fe-N codoped carbon for improved oxygen reduction reaction and high-performance Zn-air batteries	Rui Wang, Zihan Meng, Xuemin Yan, Tian Tian, Ming Lei, Rami Adel Pashameah, Hala M Abo-Dief, Hassan Algadi, Nina Huang, Zhanhu Guo, Haolin Tang	Journal of Materials Science & Technology	Q1	10.9
52	High-performance and stable hybrid photodetector based on a monolayer molybdenum disulfide (MoS ₂)/nitrogen doped graphene quantum dots (NH ₂ GQDs)/all-inorganic (CsPbBr ₃) perovskite nanocrystals triple junction	Hassan Algadi, Tanmoy Das, Junna Ren, Handong Li	Advanced Composites and Hybrid Materials	Q1	20.1
53	Morphology controllable urchin-shaped bimetallic nickel-cobalt oxide/carbon composites with enhanced electromagnetic wave absorption performance	Fushan Li, Qiuyu Li, Hideo Kimura, Xiubo Xie, Xiaoyu Zhang, Nannan Wu, Xueqin Sun, Ben Bin Xu, Hassan Algadi, Rami Adel Pashameah, Abdullah K Alanazi, Eman Alzahrani, Haodong Li, Wei Du, Zhanhu Guo, Chuanxin Hou	Journal of Materials Science & Technology	Q1	10.9
54	Progress in percolative composites with negative permittivity for applications in electromagnetic interference shielding and capacitors	Zhong Leng, Zhenyu Yang, Xinxue Tang, Mohamed H Helal, Yunpeng Qu, Peitao Xie, Zeinhom M El-Bahy, Shuwei Meng, Mohamed M Ibrahim, Changyou Yu, Hassan Algadi, Chunzhao Liu, Yao Liu	Advanced Composites and Hybrid Materials	Q1	20.1
55	Z-scheme metal organic framework@ graphene oxide composite photocatalysts with enhanced photocatalytic degradation of tetracycline	Jijun Tang, Guicheng Gao, Weiqi Luo, Qiuyang Dai, Yuchen Wang, Hala A Elzilal, Hala M Abo-Dief, Hassan Algadi, Jiaoxia Zhang	Advanced Composites and Hybrid Materials	Q1	20.1
56	Facile Method for the Preparation of a Stable, and High Performance UV-Vis Photodetector with Poly (3-	Hassan Algadi	Science of Advanced Materials	Q4	1.474

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	hexylthiophene-2, 5-diyl): PCBM Composite Polymer				
57	Effect of calcium addition on the microstructure, mechanical properties, and corrosion behavior of AZ61-Nd alloy	Zhechao Zhang, Hua Hou, Yuezhong Zhang, Mohamed E El Sayed, Mohammad N Murshed, Ahmed Samir, Pengpeng Wu, Changwei Gong, Hui Yong, Guangling Song, Daqing Fang, Deepak Sridhar, Hassan Algadi, Baosheng Liu	Advanced Composites and Hybrid Materials	Q1	20.1
58	Supramolecular self-assembly synthesis of hemoglobin-like amorphous CoP@N, P-doped carbon composites enable ultralong stable cycling under high-current density for lithium-ion battery anodes	Qin Mu, Ruilin Liu, Hideo Kimura, Jincheng Li, Huiyu Jiang, Xiaoyu Zhang, Zhipeng Yu, Xueqin Sun, Hassan Algadi, Zhanhu Guo, Wei Du, Chuanxin Hou	Advanced Composites and Hybrid Materials	Q1	20.1
59	An overview of surface with controllable wettability for microfluidic system, intelligent cleaning, water harvesting, and surface protection	Junyu Song, Ruixin Shi, Xiaoli Bai, Hassan Algadi, Deepak Sridhar	Advanced Composites and Hybrid Materials	Q1	20.1
60	Ultrasensitive wearable strain sensor for promising application in cardiac rehabilitation	Yangyang Shen, Wenke Yang, Fudong Hu, Xuwei Zheng, Yanjun Zheng, Hu Liu, Hassan Algadi, Kui Chen	Advanced Composites and Hybrid Materials	Q1	20.1
61	Radio-frequency broadband epsilon-near-zero response in biocompatible silver nanoparticles/polystyrene films with three-dimensional honeycomb-like superstructures	Haikun Wu, Zheng Zhang, Chong Wang, Khamael M Abualnaja, Hala M Abo-Dief, Qing Hou, Hassan Algadi, Rui Yin, Xiaodong Liu, Peitao Xie, Yao Liu	Advanced Composites and Hybrid Materials	Q1	20.1
62	Microstructure and mechanical properties of extruded Mg-6Al-2X (X= Cu/Ni/Fe) alloy used degradable bridge plugs	Wentao Liu, Baosheng Liu, Shaohua Zhang, Zhiping Lin, Yuezhong Zhang, Pengpeng Wu, Hassan Algadi	Advanced Composites and Hybrid Materials	Q1	20.1
63	Ruthenium oxide/cobalt oxide heterojunction electrocatalyst for biomass-derivative oxidation and hydrogen evolution	Yan Liu, Jiejie Nan, Lei Li, Ye Wang, Qian Shao, Xixi Zhu, Zhiping Lin, Junna Ren, Hassan Algadi, Ruixiang Ge	Advanced Composites and Hybrid Materials	Q1	20.1
64	Bimetallic NiCe/Lay catalysts facilitated co-pyrolysis of oleic acid and methanol for efficiently preparing anaerobic hydrocarbon fuels	Kai Zhang, Xiangyi Liu, Jiajun Bi, Amal BaQais, Ben Bin Xu, Mohammed A Amin, Ying Hou, Xianglong Liu, Handong Li, Hassan Algadi, Juan Xu, Zhanhu Guo	New Journal of Chemistry	Q2	3.3
65		Hassan Algadi	Science of Advanced Materials	Q4	1.474

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	Design and Fabrication of Optical Sensors Based on Neodymium (Nd) Doped Titanium Dioxide (TiO ₂) Layer Prepared by Sol–Gel Dip-Coating Method				
66	Synthesis and gas-sensing properties of ZnO nanoflowers for hydrogen sulphide (H ₂ S) detection	Ahmad Umar, Ahmed A Ibrahim, Mohsen A Alhamami, S Hussain, Hassan Algadi, Faheem Ahmed, Hassan Fouad, Sheikh Akbar	Materials Express	Q4	1.650
67	Progress of layered double hydroxide-based materials for supercapacitors	Xue Li, Jianning Ren, Deepak Sridhar, Ben Bin Xu, Hassan Algadi, Zeinhom M El-Bahy, Yong Ma, Tingxi Li, Zhanhu Guo	Materials Chemistry Frontiers	Q1	7
68	Progress of metal organic frameworks-based composites in electromagnetic wave absorption	Shixuan Feng, Futian Zhai, Huahua Su, Deepak Sridhar, Hassan Algadi, Ben Bin Xu, Rami Adel Pashameah, Eman Alzahrani, Hala M Abo-Dief, Yong Ma, Tingxi Li, Zhanhu Guo	Materials Today Physics	Q1	11.5
69	Highly fluorescent nickel based metal organic framework for enhanced sensing of Fe ³⁺ and Cr ^{2O7} ²⁻ ions	Jasjot Kaur, Manjot Kaur, Sushil Kumar Kansal, Ahmad Umar, Hassan Algadi	Chemosphere	Q1	8.8
70	Absorption behavior of polycarboxylate superplasticizer with different molecular structures on montmorillonite	Haifeng Yang, Mingyi Li, Lisha Pan, Ping Zhang, Rami Adel Pashameah, Hala M Abo-Dief, Shuying Xu, Chang Lin, Hassan Algadi, Jiacheng Li, Qinglong Jiang, Zhanhu Guo	Environmental Research	Q1	8.3
71	Optimum sizing of stand-alone microgrids: Wind turbine, solar photovoltaic, and energy storage system	Ahmad Alzahrani, Muhammad Arsalan Hayat, Asif Khan, Ghulam Hafeez, Farrukh Aslam Khan, Muhammad Iftikhar Khan, Sajjad Ali	Journal of Energy Storage	Q1	9.4
72	State of charge estimation and error analysis of lithium-ion batteries for electric vehicles using Kalman filter and deep neural network	Sadia Murawwat, Muhammad Majid Gulzar, Ahmad Alzahrani, Ghulam Hafeez, Farrukh Aslam Khan, Azher M Abed	Journal of Energy Storage	Q1	9.4
73	Tunable sensitivity of a waterborne bacteria detector based on a ternary photonic crystal with high-critical-	Abdulkarem HM Almawgani, Sofyan A Taya, Dana N Alhamss, Ilhami Colak,	Microsystem Technologies	Q3	2.1

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	temperature superconductor and semiconductor layers	Shobhit K Patel, Ahmad Alzahrani			
74	Solar thermal energy harvesting using graphene-based plus-shaped Cr–InSb–Cr multilayer structure	Abdulkarem HM Almwagani, Bo Bo Han, NK Anushkannan, Ammar Armghan, Ahmad Alzahrani, Shobhit K Patel	International Journal of Thermal Sciences	Q1	4.5
75	Tuberculosis detection using a low-loss and highly sensitive photonic crystal fiber technique in the terahertz regime	Sofyan A Taya, Dana N Alhamss, Abdulkarem HM Almwagani, Ahmad Alzahrani, Ilhami Colak, Shobhit K Patel	JOSA B	Q3	1.9
76	Investigating the optimal DOD and battery technology for hybrid energy generation models in cement industry using HOMER pro	Yasir Basheer, Saeed Mian Qaisar, Asad Waqar, Fahad Lateef, Ahmad Alzahrani	IEEE Access	Q2	3.9
77	Transient Stability Enhancement of DC-DC Boost Converters Feeding Constant Power Loads in DC Microgrid Applications via Composite Nonlinear Control Techniques	Subarto Kumar Ghosh, Tushar Kanti Roy, Zubaer Alam, Sajeeb Saha, Ahmad Alzahrani	IEEE Access	Q2	3.9
78	Multi-Objective Energy Optimization with Load and Distributed Energy Source Scheduling in the Smart Power Grid	Ahmad Alzahrani, Ghulam Hafeez, Sajjad Ali, Sadia Murawwat, Muhammad Iftikhar Khan, Khalid Rehman, Azher M Abed	Sustainability	Q2	3.9
79	Creatinine Detection by Surface Plasmon Resonance Sensor Using Layers of Cerium Oxide and Graphene Over Conventional Kretschmann Configuration	Abdulkarem HM Almwagani, Arun Uniyal, Partha Sarkar, Gaurav Srivastava, Ahmad Alzahrani, Sofyan A Taya, Arjuna Muduli, Amrindra Pal	Plasmonics	Q3	3
80	Energy management and optimization of a standalone renewable energy system in rural areas of the Najran Province	Ahmad Alzahrani	Sustainability	Q2	3.9
81	Optimized Nonlinear Integral Backstepping Controller for DC-DC Three-Level Boost Converters	Imane Ait Ayad, Elmostafa Elwarraki, Syed Umaid Ali, Saeed Mian Qaisar, Asad Waqar, Mohamed Baghdadi, Ahmad Alzahrani	IEEE Access	Q2	3.9
82	Interleaved Switched-Inductor Boost Converter for Photovoltaic Energy Application	Ahmad Alzahrani	Arabian Journal for Science and Engineering	Q2	2.9
83	Demand Response for Optimal Power Usage Scheduling Considering Time and Power Flexibility of Load in Smart Grid	Ahmad Alzahrani, Ghulam Hafeez, Gul Rukh, Sadia Murawwat, Faiza Iftikhar, Sajjad Ali, Syed Irtaza Haider,	IEEE Access	Q2	3.9

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		Muhammad Iftikhar Khan, Azher M Abed			
84	Real-time energy optimization and scheduling of buildings integrated with renewable microgrid	Ahmad Alzahrani, Khizar Sajjad, Ghulam Hafeez, Sadia Murawwat, Sheraz Khan, Farrukh Aslam Khan	Applied Energy	Q1	11.2
85	Analysis and validation of multi-device interleaved DC-DC boost converter for electric vehicle applications	Ahmad Alzahrani, Gunapriya Devarajan, Sivaranjani Subramani, Indragandhi Vairavasundaram, Cosmas Uchenna Ogbuka	IET Power Electronics	Q3	2
86	A Strategy for Multi-Objective Energy Optimization in Smart Grid Considering Renewable Energy and Batteries Energy Storage System	Ahmad Alzahrani, Mujeeb Ur Rahman, Ghulam Hafeez, Gul Rukh, Sajjad Ali, Sadia Murawwat, Faiza Iftikhar, Syed Irtaza Haider, Muhammad Iftikhar Khan, Azher M Abed	IEEE Access	Q2	3.9
87	Experimental Investigation of Controlled and Uncontrolled Rectifiers for Low-Power Wind Turbines	Ahmad Alzahrani	Applied Sciences	Q2	2.7
88	Design and Performance Analysis of Ultra-Wide Bandgap Power Devices-Based EV Fast Charger Using Bi-Directional Power Converters	Tehseen Ilahi, Tahir Izhar, Saeed Mian Qaisar, Umar Tabrez Shami, Muhammad Zahid, Asad Waqar, Ahmad Alzahrani	IEEE Access	Q2	3.9
89	Design and Implementation of SAE J1939 and Modbus Communication Protocols for Electric Vehicle	Ahmad Alzahrani, Shriya Makarand Wangikar, Vairavasundaram Indragandhi, Rassaiah Raja Singh, Vairavasundaram Subramaniaswamy	Machines	Q2	2.6
90	An optimal energy management strategy for a photovoltaic/li-ion battery power system for DC microgrid application	Salam J Yaqoob, Husam Arnoos, Mohammed A Qasim, Ephraim B Agyekum, Ahmad Alzahrani, Salah Kamel	Frontiers in Energy Research	Q3	3.4
91	Portable Prototype of Hydrogen Fuel Cells for Educational Training	Ahmad Alzahrani	Applied Sciences	Q2	2.7
92	Optical absorption performance of CZTS/ZnO thin film solar cells comprising anti-reflecting coating of texturing configuration	Abdulkarem HM Almwagani, Ahmad Alzahrani, Ali Hajjiah, Ahmed Mehaney, Hussein A Elsayed, Hassan Sayed	RSC advances	Q2	3.9
93	Synergistic Flame Retardancy and Electrical Conductivity in di-glycidyl ether	Ayesha Afzal, Hassan B Albargi, Iqra Abdul Abdul	Materials Research Express	Q3	2.3

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	of bisphenol-A Epoxy Composites with Polyaniline and Aluminum Tri-hydroxide	Rashid, Asra Tariq, Zubair Khaliq, HM Fayzan Shakir, Muhammad Bilal Qadir, M Rehan Sharif, Raveel Nadeem, Mohammed Jalalah, MM Abdullah, Aref M Al-Syadi			
94	Enhancement of total reducing sugar content from seaweeds (SWs) biomass via pretreatment for ethanol production: an optimized study	Yulu Yang, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, Abdulrhman A Almadiy, Nandini Thakur, El-Sayed Salama	Biomass Conversion and Biorefinery	Q2	4
95	Utilization of macromolecules from macroalgal biomass: identification, characterization, and potential applications	Quanxin Li, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, Abdulrhman A Almadiy, Yang Yang, El-Sayed Salama	Environment, Development and Sustainability	Q2	4.9
96	Statistically Analyzed Heavy Metal Removal Efficiency of Silica-Coated Cu _{0.50} Mg _{0.50} Fe ₂ O ₄ Magnetic Adsorbent for Wastewater Treatment	Muhammad Irfan, Anam Arif, Muhammad Adnan Munir, Muhammad Yasin Naz, Shazia Shukrullah, Saifur Rahman, Mohammed Jalalah, Abdulkarem HM Almwagani	ACS omega	Q2	4.1
97	Harnessing the Antimicrobial Potential of Natural Starch and Mint Extract in PVA-Based Biodegradable films against Staphylococcus aureus bacteria	Iqra Abdul Abdul Rashid, Mohd Faisal, Ahsan Ahmad, Ayesha Afzal, Zubair Khaliq, M Sahaam Ashraf, Hafiz Muhammad fayzan Shakir, Asra Tariq, Muhammad Bilal Qadir, Muhammad Irfan, Farid A Harraz, Mohammed Jalalah	Materials Research Express	Q3	2.3
98	Facile synthesis of Pd nanoparticles dispersed polypyrrole-carbon black/NiO nanocomposite with enhanced photocatalytic degradation of colored and colorless organic pollutants	M Faisal, Jahir Ahmed, Mohammed Jalalah, Ahmed Mohamed El-Toni, Joselito P Labis, Aslam Khan, Farid A Harraz	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Q2	5.2
99	High-performance supercapacitor based on self-heteroatom-doped porous carbon electrodes fabricated from Mikania micrantha	Mohammed Jalalah, HyukSu Han, Arpan Kumar Nayak, Farid A Harraz	Advanced Composites and Hybrid Materials	Q1	20.1
100	Microplastics (MPs) in wastewater treatment plants sludges: Substrates, digestive properties, microbial communities, mechanisms, and treatments	Wenbo Kong, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, Abdulrhman A Almadiy, Yuanzhang	Journal of Environmental Chemical Engineering	Q1	7.7

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		Zheng, Nandini Thakur, El-Sayed Salama			
101	Effect of pharmaceutical and domestic wastewater mixed ratios on microalgal growth for nutrients removal coupled with biomass and liquid biofuel generation	Zhenni Su, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, Abdulrhman A Almadiy, Monika Sharma, El-Sayed Salama	Biomass Conversion and Biorefinery	Q2	4
102	Azadirachta indica-assisted green synthesis of magnesium oxide nanoparticles for degradation of Reactive Red 195 dye: a sustainable environmental remedial approach	Shumaila Kiran, Hasan B Albargi, Gulnaz Afzal, Ume Aimun, Muhammad Naveed Anjum, Muhammad Bilal Qadir, Zubair Khaliq, Mohammed Jalalah, Muhammad Irfan, MM Abdullah	Applied Water Science	Q1	5.5
103	Fat, oil, and grease as new feedstock towards bioelectrogenesis in microbial fuel cells: Microbial diversity, metabolic pathways, and key enzymes	Monika Sharma, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, Abdulrhman A Almadiy, Nandini Thakur, El-Sayed Salama, Xiangkai Li	Journal of Energy Chemistry	Q1	13.1
104	Activated sludge of wastewater as a source of potential bacteria for degradation of polyaromatic hydrocarbon: growth kinetics and metabolic pathway	Monika Sharma, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, El-Sayed Salama, Xiangkai Li	Biomass Conversion and Biorefinery	Q2	4
105	Effectiveness of Deep Learning Models for Brain Tumor Classification and Segmentation.	Muhammad Irfan, Ahmad Shaf, Tariq Ali, Umar Farooq, Saifur Rahman, Salim Nasar Faraj Mursal, Mohammed Jalalah, Samar M Alqhtani, Omar AlShorman	Computers, Materials & Continua	Q3	3.1
106	Greener Approach for Pd-NPs Synthesis Using Mangifera Indica Leaf Extract: Heterogeneous Nano Catalyst for Direct C-H Arylation of (Poly)Fluorobenzene, Hiyama Coupling Reaction and Hydrogen Evolution Reaction Study	Akshay S Limaye, Mabkhoot Alsaiairi, Pratik V Shinde, Arnab Ghosh, Mohammed Jalalah, Chandra Sekhar Rout, Siddappa A Patil, Farid A Harraz, Ramesh B Dateer	Catalysis Letters	Q3	2.8
107	Effects of potassium dichromate on the structural, linear/nonlinear optical properties of the fabricated PVA/PVP polymeric blends: For optoelectronics	TH AlAbdulaal, Ali Almoadi, IS Yahia, HY Zahran, Mohammed S Alqhtani, S Alahmari, Mohammed Jalalah, Farid A Harraz, MS Al-Assiri	Materials Science and Engineering: B	Q2	3.6
108	Biomass-derived metal-free porous carbon electrocatalyst for efficient oxygen reduction reactions	Mohammed Jalalah, HyukSu Han, Arpan Kumar Nayak, Farid A Harraz	Journal of the Taiwan Institute of Chemical Engineers	Q1	5.7

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109	Differential carbonization-shrinkage induced hierarchically rough PAN/PDMS nanofiber composite membrane for robust multimodal superhydrophobic applications	Adnan Ahmad, Hasan Albargi, Mumtaz Ali, Misbah Batool, Ahsan Nazir, Muhammad Bilal Qadir, Zubair Khaliq, Salman Noshear Arshad, Mohammed Jalalah, Farid A Harraz	Journal of Science: Advanced Materials and Devices	Q1	8
110	Analysis of the Performance of a Gel Actuator Made of Plasticized Polyvinyl Chloride/Carboxylated Cellulose Nanocrystals	Muhammad Irfan, Imdad Ali, Ahmed Ali, Mushtaq Ahmed, Toufique A Soomro, Weimin Yang, Saifur Rahman, Salim Nasar Faraj Mursal, Mohammed Jalalah, Abdalnour Ali Jazem Ghanim	ACS omega	Q2	4.1
111	Rapid elimination of antibiotic gemifloxacin mesylate and methylene blue over Pt nanoparticles dispersed chitosan/g-C ₃ N ₄ ternary visible light photocatalyst	Mohd Faisal, Jahir Ahmed, Mohammed Jalalah, Saeed A Alsareii, Mabkhoot Alsaiani, Farid A Harraz	Environmental Science and Pollution Research	Q1	5.8
112	Novel interconnected hierarchical porous carbon derived from biomass for enhanced supercapacitor application	Mohammed Jalalah, HyukSu Han, Milan Mahadani, Arpan Kumar Nayak, Farid A Harraz	Journal of Electroanalytical Chemistry	Q1	4.5
113	Monodispersed NiO Nanoparticles into SBA-15: An Efficient Nanocatalyst to Produce Ketone-Alcohol (KA) Oil by the Oxidation of Cyclohexane in Mild Conditions	Mohamed Abboud, Reem S Alnefaie, Asla A AL-Zahrani, Nabil Al-Zaqri, Mohammad Abu Haija, Azza Al-Ghamdi, Mabkhoot Alsaiani, Mohammed Jalalah, Omeer Albormani, Mohamed S Hamdy	Sustainability	Q2	3.9
114	Nano-Silica Bubbled Structure Based Durable and Flexible Superhydrophobic Electrospun Nanofibrous Membrane for Extensive Functional Applications	Misbah Batool, Hasan B. Albargi, Adnan Ahmad, Zahid Sarwar, Zubair Khaliq, Muhammad Bilal Qadir, Salman Noshear Arshad, Rizwan Tahir, Sultan Ali, Mohammed Jalalah, Muhammad Irfan, Farid A Harraz	Nanomaterials	Q1	5.3
115	Development and Characterization of Drug Loaded PVA/PCL Fibres for Wound Dressing Applications	Ali Afzal, Mohammed Jalalah, Abid Noor, Zubair Khaliq, Muhammad Bilal Qadir, Rashid Masood, Ahsan Nazir, Sheraz Ahmad, Faheem Ahmad, Muhammad Irfan, Munazza Afzal, Mohd	Polymers	Q1	5

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		Faisal, Saeed A Alsareii, Farid A Harraz			
116	Numerical analysis of two-phase nanofluid flow on the thermal efficiency of a circular heat sink for cooling of LEDs	MM Abdullah, Hassan B Albargi, Jawed Mustafa, Mohammad Zaki Ahmad, Mohammed Jalalah, Mohsen Sharifpur	Engineering Analysis with Boundary Elements		3.3
117	Rapid, external acid-free synthesis of Bi ₂ WO ₆ nanocomposite for efficient supercapacitor application	Mohammed Jalalah, Ananta Sasmal, Arpan Kumar Nayak, Farid A Harraz	Journal of the Taiwan Institute of Chemical Engineers	Q1	5.7
118	Development of Sustainable Hydrophilic Azadirachta indica Loaded PVA Nanomembranes for Cosmetic Facemask Applications	Rizwan Tahir, Hasan B Albargi, Adnan Ahmad, Muhammad Bilal Qadir, Zubair Khaliq, Ahsan Nazir, Tanzeela Khalid, Misbah Batool, Salman Noshear Arshad, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz	Membranes	Q1	4.2
119	Fabrication of an Energy-Dense, Binder-Free Zn/V ₅ O ₁₂ -6H ₂ O Solid-State In-Plane Flexible Battery via a Rapid and Scalable Approach	Prahlad Yadav, Nataraj Sanna Kotrappanavar, Pooja B Naik, Hemanth Kumar Beere, Ketaki Samanta, Naveen S Reddy, Jari S Algethami, Mohammed Jalalah, Farid A Harraz, Debasis Ghosh	ACS Applied Energy Materials	Q1	6.4
120	Facile Synthesis of Poly(o-anisidine)/Graphitic Carbon Nitride/Zinc Oxide Composite for Photo-Catalytic Degradation of Congo Red Dye	Mohammed Jalalah, Zubair Nabi, Muhammad Naveed Anjum, Mirza Nadeem Ahmad, Atta Ul Haq, Muhammad Bilal Qadir, Mohd Faisal, Mabkhoot Alsaiari, Muhammad Irfan, Farid A Harraz	Catalysts	Q2	3.9
121	Microencapsulation based fire retardant eco-friendly jute composite	Mohammed Jalalah, Sumra Zulfiqar, Ayesha Afzal, Zubair Khaliq, Muhammad B Qadir, Ayesha Abid, M Faisal, Mabkhoot Alsaiari, Muhammad Irfan, Farid A Harraz	Polymers and Polymer Composites	Q3	2.1
122	Growth kinetics and metabolic characteristics of five freshwater indigenous microalgae for nutrient removal and biofuel generation: a sustainable approach	Min Zhang, Mohammed Jalalah, Saeed A Alsareii, Farid A Harraz, Qi Yang, Monika Sharma, El-Sayed Salama	Biomass Conversion and Biorefinery	Q2	4

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123	A novel gold-decorated porous silicon-poly (3-hexylthiophene) ternary nanocomposite as a highly sensitive and selective non-enzymatic dopamine electrochemical sensor	Jahir Ahmed, M Faisal, SA Alsareii, Mohammed Jalalah, Farid A Harraz	Journal of Alloys and Compounds	Q1	6.2
124	Detection of hydrogen peroxide with low-dimensional silver nanoparticle-decorated PPy-C/TiO ₂ nanocomposites by electrochemical approach	M Faisal, MM Alam, Abdullah M Asiri, Mabkhoot Alsaieri, Raja Saad Alruwais, Mohammed Jalalah, O Madkhali, Mohammed M Rahman, Farid A Harraz	Journal of Electroanalytical Chemistry	Q1	4.5
125	A comprehensive review of pre-lithiation/sodiation additives for Li-ion and Na-ion batteries	Pranav Kulkarni, Hyunyoung Jung, Debasis Ghosh, Mohammed Jalalah, Mabkhoot Alsaieri, Farid A Harraz, R Geetha Balakrishna	Journal of Energy Chemistry	Q1	13.1
126	Mn ₂ O ₃ nanoparticle-porous silicon nanocomposite based amperometric sensor for sensitive detection and quantification of Acetaminophen in real samples	Jahir Ahmed, M Faisal, SA Alsareii, Mohammed Jalalah, Mabkhoot Alsaieri, Farid A Harraz	Ceramics International	Q1	
127	Advancements in foam-based phase change materials: Unveiling leakage control, enhanced thermal conductivity, and promising applications	Anas Islam, AK Pandey, R Saidur, Belqasem Aljafari, VV Tyagi	Journal of Energy Storage	Q1	9.4
128	Thermo-kinetic behaviour of green synthesized nanomaterial enhanced organic phase change material: Model fitting approach	B Kalidasan, AK Pandey, Belqasem Aljafari, Subramaniyan Chinnasamy, Tareq Kareri, Saidur Rahman	Journal of Environmental Management	Q4	8.7
129	Analyzing the thermal potential of binary 2D (h-BN/Gr) nanoparticles enhanced lauric acid phase change material for photovoltaic thermal system application	Yasir Ali Bhutto, AK Pandey, R Saidur, Belqasem Aljafari, VV Tyagi	Journal of Energy Storage	Q1	9.4
130	Optimizing the allocation of renewable DGs, DSTATCOM, and BESS to mitigate the impact of electric vehicle charging stations on radial distribution systems	T Yuvaraj, TD Suresh, Ulagammai Meyyappan, Belqasem Aljafari, Sudhakar Babu Thanikanti	Heliyon	Q2	4
131	Expanded graphite intersperse reliable binary eutectic phase change material for low temperature thermal regulation systems	B Kalidasan, AK Pandey, R Saidur, Belqasem Aljafari, Tareq Kareri	Materials Today Sustainability	Q1	7.8
132	Synthesis and characterization of polyethylene glycol-polymethyl methacrylate infused multiwalled carbon	Aman Yadav, M Samykano, AK Pandey, Belqasem Aljafari, VV Tyagi	Materials Today Communications	Q2	3.8

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	nanotube nanocomposite as an efficient thermal energy storage				
133	Green synthesized 3D coconut shell biochar/polyethylene glycol composite as thermal energy storage material	B Kalidasan, AK Pandey, R Saidur, Belqasem Aljafari, Aman Yadav, M Samykano	Sustainable Energy Technologies and Assessments	Q1	8
134	An efficient power extraction technique for improved performance and reliability of solar PV arrays during partial shading	Priya Ranjan Satpathy, Belqasem Aljafari, Sudhakar Babu Thanikanti, Renu Sharma	Energy	Q1	3.2
135	Minimizing the electric vehicle charging stations impact in the distribution networks by simultaneous allocation of DG and DSTATCOM with considering uncertainty in load	T Yuvaraj, KR Devabalaji, Sudhakar Babu Thanikanti, Belqasem Aljafari, Nnamdi Nwulu	Energy Reports	Q2	5.2
136	Thermal energy harvesting of highly conductive graphene-enhanced paraffin phase change material	Imtiaz Ali Laghari, AK Pandey, M Samykano, Belqasem Aljafari, K Kadrigama, Kamal Sharma, VV Tyagi	Journal of Thermal Analysis and Calorimetry	Q1	4.4
137	Maximizing techno-economic-environmental benefits of renewable energy allocation with smart inverter in distribution system: a two-layer stochastic optimization framework	Belqasem Aljafari, Vijay Babu Pamshetti, Sudhakar Babu Thanikanti	International Journal of Green Energy	Q2	3.3
138	Innovative Methodologies for Higher Global MPP of Photovoltaic Arrays under PSCs: Experimental Validation	Belqasem Aljafari, Rupendra Kumar Pachauri, Sudhakar Babu Thanikanti, Bamidele Victor Ayodele	Sustainability	Q2	3.9
139	Rotor Bar Fault Diagnosis in Indirect Field-Oriented Control-Fed Induction Motor Drive Using Hilbert Transform, Discrete Wavelet Transform, and Energy Eigenvalue Computation	Senthil Kumar Ramu, Indragandhi Vairavasundaram, Belqasem Aljafari, Tareq Kareri	Machines	Q2	2.6
140	PV-Fed Micro-Inverter with Battery Storage for Single Phase Grid Applications	Padmavathi Pydikalva, Sudhakar Natarajan, Belqasem Aljafari, Karthik Balasubramanian, Sudhakar Babu Thanikanti	Electric Power Components and Systems	Q4	1.5
141	Production enhancement of long string photovoltaic plants during partial shading through switching capacitor power optimizer circuit	Belqasem Aljafari	Alexandria Engineering Journal	Q1	6.8
142	Synthesized Sea Urchin Morphology of Copper Incorporated Hollandite Manganese dioxide for Energy Storage Applications	Belqasem Aljafari, Sneha James, Jerry J Wu, Sambandam Anandan	Journal of Alloys and Compounds	Q1	6.2

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143	Intelligent RBF-Fuzzy Controller Based Non-Isolated DC-DC Multi-Port Converter for Renewable Energy Applications	Belqasem Aljafari, Gunapriya Devarajan, Sivaranjani Subramani, Subramaniaswamy Vairavasundaram	Sustainability	Q2	3.9
144	Solar photovoltaic converter controller using opposition-based reinforcement learning with butterfly optimization algorithm under partial shading conditions	Belqasem Aljafari, Praveen Kumar Balachandran, Devakirubakaran Samithas, Sudhakar Babu Thanikanti	Environmental Science and Pollution Research		5.8
145	Design and Control of Multicoil Active Magnetic Bearing System for High-Speed Application	Sukanta Debnath, Upama Das, Pabitra Kumar Biswas, Belqasem Aljafari, Sudhakar Babu Thanikanti	Energies	Q3	3.2
146	Power enhanced solar PV array configuration based on calcdoku puzzle pattern for partial shaded PV system	Belqasem Aljafari, S Devakirubakaran, C Bharatiraja, Praveen Kumar Balachandran, Thanikanti Sudhakar Babu	Heliyon	Q2	4
147	Synthesis of Crosslinked Hydroxypropyl Methylcellulose with Methyl Gallate-Poly (Ethylene Glycol) as a Gel Electrolyte for Dye-Sensitized Solar Cells	Ahalya Gunasekaran, Andrea Sorrentino, Belqasem Aljafari, Sambandam Anandan	physica status solidi (a)		2
148	Analysis of Optimal Load Management Using a Stand-Alone Hybrid AC/DC Microgrid System	Vasantharaj Subramanian, Indragandhi Vairavasundaram, Belqasem Aljafari	International Transactions on Electrical Energy Systems	Q3	2.3
149	The Design of 2S2L-Based Buck-Boost Converter with a Wide Conversion Range	B Nagi Reddy, B Srikanth Goud, Sai Kalyan, Ch Naga, Praveen Kumar Balachandran, Belqasem Aljafari, K Sangeetha	International Transactions on Electrical Energy Systems	Q3	2.3
150	Hybrid Controlled Multi-Input DC/DC Converter for Electric Vehicle Application	Mohan Bharathidasan, Vairavasundaram Indragandhi, Belqasem Aljafari	International Transactions on Electrical Energy Systems	Q3	2.3
151	Design of multi-input single output DC-DC converter with preserved output voltage under source-fault	M Dhananjaya, B Krishna Chaitanya, Thanikanti Sudhakar Babu, Devendra Potnuru, Belqasem Aljafari, Ramani Kannan, Tarun Kumar Lohani	IET Power Electronics	Q3	2
152	Electrical fault tolerance of photovoltaic array configurations: Experimental investigation, performance analysis, monitoring and detection	Priya Ranjan Satpathy, Belqasem Aljafari, Sudhakar Babu Thanikanti, Siva Rama Krishna Madeti	Renewable Energy	Q1	8.7
153	A zero switch and sensorless reconfiguration approach for sustainable operation of roof-top photovoltaic system during partial shading	Belqasem Aljafari, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, Hassan Haes Alhelou	IET Renewable Power Generation	Q3	2.6
154	Removal of tartrazine dye and mercury present in aqueous solutions using hexamethylenetetramine exfoliated MoS ₂ nanosheets as adsorbent: a comparison of kinetic and isotherm models	Ragini Pirarath, Belqasem Aljafari, Jerry J Wu, Sambandam Anandan	Bulletin of Materials Science	Q4	1.8
155	A dynamic mismatch loss mitigation algorithm with dual input dual output converter for solar PV systems	Sudhakar Babu Thanikanti, Praveen Kumar, S Devakirubakaran, Belqasem Aljafari, Ilhami Colak	Solar Energy Materials and Solar Cells	Q1	6.9
156	A Novel Multicriteria Optimization Technique for VLSI Floorplanning Based on Hybridized Firefly and Ant Colony Systems	B Srinivasan, R Venkatesan, Belqasem Aljafari, Ketan Kotecha, V Indragandhi, Subramaniaswamy Vairavasundaram	IEEE Access	Q2	3.9
157	A systematic study on reinforcement learning based applications	Keerthana Sivamayil, Elakkiya Rajasekar, Belqasem Aljafari, Srete Nikolovski, Subramaniaswamy Vairavasundaram, Indragandhi Vairavasundaram	Energies	Q3	3.2

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158	Modelling, simulation and performance comparison of different membership functions based fuzzy logic control for an active magnetic bearing system	Suraj Gupta, Pabitra Kumar Biswas, Belqasem Aljafari, Sudhakar Babu Thanikanti, Sajal K Das	The Journal of Engineering	Q2	0.7
159	Energy-Economic-Environmental (3E) modeling of a near-zero energy community using the solar-power system: A case study of Najran city	Belqasem Aljafari, Saeed Alqaed, Jawed Mustafa, Fahad Awjah Almeahadi, Mohsen Sharifpur	Journal of the Taiwan Institute of Chemical Engineers	Q1	5.7
160	Electric vehicle optimum charging-discharging scheduling with dynamic pricing employing multi agent deep neural network	Belqasem Aljafari, Pandia Rajan Jeyaraj, Aravind Chellachi Kathiresan, Sudhakar Babu Thanikanti	Computers and Electrical Engineering	Q2	4.3
161	Nanostructured zinc orthotitanates for photocatalytic removal of dye pollutants	Ragini Pirarath, Ujwala O Bhagwat, Sivashanmugam Palani, Belqasem Aljafari, Anandan Sambandam	Materials Science and Engineering: B	Q2	3.6
162	Development of a biosensor based on a surface plasmon resonance structure comprising strontium titanate, graphene and affinity layers for malaria diagnosis	Abdulkarem HM Almwagani, Sofyan A Taya, Mariam A Abutailkh, Khedr M Abohassan, Ayman Taher Hindi, Ilhami Colak, Amrindra Pal, Shobhit K Patel	Modern Physics Letters B	Q2	1.9
163	Assessment of Refractive Index-Based SPR Sensor for Branched Chain AA	Lokendra Singh, Abdulkarem HM Almwagani, Krishna Kant Agrawal, Roshan Kumar, Yahya Ali Abdelrahman Ali, Vipul Agrawal	Plasmonics	Q3	3
164	RNN-LSTM model for reliable optical transmission in flexible switching network systems	Abdulkarem HM Almwagani	Wireless Networks	Q4	3
165	Development of an Alignment Model for the Implementation of DevOps in SMEs: An Exploratory Study	Mohamed BF Sanjeetha, Ghassan Ahmed Ali, Samsudeen S Nawaz, Abdulkarem HM Almwagani, Yahya Ali Abdelrahman Ali	IEEE Access	Q2	3.9
166	THz Plasmonic Metamaterial Antenna with High Isolation and Geometrical Performance Optimization for 6G/TWPAN Applications	Shobhit K Patel, Deval Jansari, S Syed Jamaesha, Abdulkarem HM Almwagani, Yahya Ali Abdelrahman Ali, Sunil Lavadiya	Plasmonics	Q3	3
167	Investigation and Analysis of Graphene-Based Surface Plasmon Resonance Solar Absorber Design Using Au-GaAs-Cr Structure for UV and Visible Region	Sanket Patel, Dhruvik Agravat, Abdulkarem HM Almwagani, Yahya Ali Abdelrahman Ali, Sunil Lavadiya, Shobhit K Patel	Plasmonics	Q3	3
168	Statistically Analyzed Heavy Metal Removal Efficiency of Silica-Coated Cu _{0.50} Mg _{0.50} Fe ₂ O ₄ Magnetic Adsorbent for Wastewater Treatment	Muhammad Irfan, Anam Arif, Muhammad Adnan Munir, Muhammad Yasin Naz, Shazia Shukrullah, Saifur Rahman, Mohammed Jalalah, Abdulkarem HM Almwagani	ACS omega	Q2	4.1
169	Graphene-Based THz Surface Plasmon Resonance Biosensor for Hemoglobin Detection Applicable in Forensic Science	Jacob Wekalao, Arun Kumar U, Abdulkarem HM Almwagani, Yahya Ali Abdelrahman Ali, Rinku Manvani, Shobhit K Patel	Plasmonics	Q3	3

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170	Smart double glazing integrated polymer dispersed liquid crystal for enhancing building's thermal performance in hot-arid climate	Abdultawab M Qahtan, Abdulkarem HM Almwagani, Aritra Ghosh	Journal of Building Engineering	Q1	6.4
171	Design of graphene-based broadband metamaterial absorber with circuit analysis approach for terahertz region applications	K Vasu Babu, Priyanka Das, Sudipta Das, Abdulkarem HM Almwagani, Tanvir Islam, Adam RH Alhawari	Optical and Quantum Electronics	Q2	3
172	Solar Thermal Absorber Using Fe ₂ O ₃ -SnSe ₂ -Ti-Layered Structure Based on Graphene Material	Abdulkarem HM Almwagani, Bo Bo Han, Shobhit K Patel, Ammar Armghan, Basim Ahmad Alabsi, Sofyan A Taya	Advanced Theory and Simulations	Q2	3.3
173	SPR-Based Label-Free Sensor for RI-Based Detection of Urea Concentration	Lokendra Singh, Abdulkarem HM Almwagani, Yesudasu Vasimalla, Roshan Kumar, Turki Alsuwian	Plasmonics	Q3	3
174	Optical biosensor based on surface plasmon resonance nanostructure for the detection of mycobacterium tuberculosis bacteria with ultra-high efficiency and detection accuracy	Malek G Daher, Sofyan A Taya, Abdulkarem HM Almwagani, Ayman Taher Hindi, Ilhami Colak, Shobhit K Patel	Plasmonics	Q3	3
175	Dual-polarized 8-port sub 6 GHz 5G MIMO diamond-ring slot antenna for smart phone and portable wireless applications	Yasir Fawad, Sadiq Ullah, Muhammad Irfan, Rizwan Ullah, Saifur Rahman, Fazal Muhammad, Abdulkarem HM Almwagani, Salim Nasar Faraj Mursal	Plos one	Q2	3.7
176	Six-element MIMO antenna structure with squared ring structure with multiband and high gain characteristics for C/X/Ku/K band applications	Abdulkarem HM Almwagani, Vishal Sorathiya, Vipul M Dabhi, Adam RH Alhawari, Mohd Fadzli Mohd Salleh	Physica Scripta	Q2	2.9
177	Dual Band Metasurface Absorber with Insensitive Polarization and Incidence Angle for S and C Band Applications	AHM Almwagani, K Srilatha, BTP Madhav, B Venkatesh, CVSA Sravan, MC Rao, ARH Alhawari	Journal of Communications Technology and Electronics	Q4	0.5
178	A hybrid ANN model designed to improve the Quality of Transmission of optical communication network	Abdulkarem HM Almwagani	Optical and Quantum Electronics	Q2	3
179	Sensitivity enhancement of optical plasmon-based sensor for detection of the hemoglobin and glucose: a numerical approach	Abdulkarem HM Almwagani, Arun Uniyal, Partha Sarkar, Gaurav Srivastava, Amrindra Pal, Adam RH Alhawari, Sofyan A. Taya, Arjuna Muduli	Optical and Quantum Electronics	Q2	3
180	Deep learning assisted fractal slotted substrate MIMO antenna with characteristic mode analysis (CMA) for Sub-6 GHz n78 5 G NR applications: design, optimization and experimental validation	K Vasu Babu, Das Sudipta, Gorre Naga Jyothi Sree, Abdulkarem HM Almwagani, Tanvir Islam, Adam RH Alhawari	Physica Scripta	Q2	2.9
181	Graphene-Based Cross-Shaped Surface Plasmon Resonance Solar Absorber Design for Solar Thermal Energy Converters	Shobhit K Patel, Bo Bo Han, NK Anushkannan, Jaymin Bhalani, Abdulkarem HM Almwagani, Yahya Ali Abdelrahman Ali	Plasmonics	Q3	3
182	Absorption Properties of a Defective Binary Photonic Crystal Consisting of a Metamaterial, SiO ₂ , and Two Graphene Sheets	Mahassen Elblbeisi, Sofyan A Taya, Abdulkarem HM Almwagani, Ayman Taher Hindi, Dana N Alhamss, Ilhami Colak, Shobhit K Patel	Plasmonics	Q3	3
183	Borophene-Ge ₂ Sb ₂ Te ₅ (GST)-Based Refractive Index Sensor: Numerical Study and Behaviour Prediction Using Machine Learning	Vishal Sorathiya, Umangbhai Soni, Vipul Vekariya, Jaysheel Golani, Abdulkarem HM Almwagani, Adam RH Alhawari	Plasmonics	Q3	3
184	Detection of Harmful Chemical Compounds in Plastic Products Using a	Sofyan A Taya, Samer M Srouf, Abdulkarem HM Almwagani, Ayman Taher	physica status solidi (a)		2

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	High-Sensitivity Photonic Crystal-Based Sensor	Hindi, Ilhami Colak, Shobhit K Patel			
185	Impact of optical device parameters on the performance characteristics of temperature dependent quantum cascade lasers	Abdulkarem HM Almwagani, B Ramasubba Reddy, Turki Alsuwian, P Ashok, CR Rathish, M Ganesh Madhan	Optical and Quantum Electronics	Q2	3
186	Theoretical analysis of a refractive index sensor based on a photonic crystal fiber with a rectangular core	Abdulkarem HM Almwagani, Dana N Alhamss, Sofyan A Taya, Ayman Taher Hindi, Anurag Upadhyay, Shivam Singh, Ilhami Colak, Amrindra Pal, Shobhit K Patel	Optical and Quantum Electronics	Q2	3
187	Detection of SARS-CoV-2 Virus Concentration Using a Simple Structure of Binary Photonic Crystal Sensor	Sofyan A Taya, Malek G Daher, Abdulkarem HM Almwagani, Ayman Taher Hindi, Ilhami Colak	physica status solidi (a)		2
188	Structural investigation of ultra-Broadband disk-shaped resonator solar absorber structure based on CNT-TiC composites for solar energy harvesting	Abdulkarem HM Almwagani, Dhruvik Agravat, Shobhit K Patel, Muhammad Irfan, Khaled Aliqab, Meshari Alsharari, Ammar Armghan	International Journal of Thermal Sciences	Q1	4.5
189	Artificial dragonfly algorithm in the Hopfield neural network for optimal Exact Boolean k satisfiability representation	Ghassan Ahmed Ali, Hamza Abubakar, Shehab Abdulhabib Saeed Alzaeemi, Abdulkarem HM Almwagani, Adel Sulaiman, Kim Gaik Tay	Plos one	Q2	3.7
190	Investigation of a Novel Graphene-Based Surface Plasmon Resonance Solar Absorber to Achieve High Absorption Efficiency Over a Wide Spectrum of Wavelengths, from Ultraviolet to Infrared	Dhruvik Agravat, Shobhit K Patel, Abdulkarem HM Almwagani, Turki Alsuwian, Ammar Armghan, Malek G Daher	Plasmonics	Q3	3
191	Graphene-Based Highly Efficient Surface Plasmon Resonance Thin Film Design with Zr-Cr-W Multilayer Structure for Solar Energy Absorption	Abdulkarem HM Almwagani, Bo Bo Han, Shobhit K Patel, Ammar Armghan, Basim Ahmad Alabsi, Sofyan A Taya	Plasmonics	Q3	3
192	A promising ultra-sensitive CO2 sensor at varying concentrations and temperatures based on Fano resonance phenomenon in different 1D phononic crystal designs	Abdulkarem HM Almwagani, Hamza Makhloof Fathy, Hussein A Elsayed, Yahya Ali Abdelrahman Ali, Ahmed Mehaney	Scientific Reports	Q2	4.6
193	Surface Plasmon Resonance-based Ultra-broadband Solar Thermal Absorber Design Using Graphene Material	Abdulkarem HM Almwagani, Bo Bo Han, Arun Kumar U, Ammar Armghan, Muhammad Irfan, Shobhit K Patel	Plasmonics	Q3	3
194	Design of Surface Plasmon Resonance-Based Solar Absorber Using Bloom-Shaped Au-InSb-Al Structure	Abdulkarem HM Almwagani, Bo Bo Han, Shobhit K Patel, Ammar Armghan, Basim Ahmad Alabsi, Sofyan A Taya	Plasmonics	Q3	3
195	Multiband and high gain meandered metamaterial THz MIMO antenna for highspeed wireless communication applications	Ammar Armghan, Meshari Alsharari, Khaled Aliqab, Abdulkarem HM Almwagani, Muhammad Irfan, Shobhit K Patel	Optical and Quantum Electronics	Q2	3
196	Fano resonance based on coupling between nanoring resonator and MIM waveguide for refractive index sensor	Zain Elabdeen A Mohamed, Sofyan A Taya, Abdulkarem HM Almwagani, Ayman Taher Hindi	Plasmonics	Q3	3
197	Versatility Investigation of Grown Titanium Dioxide Nanoparticles and Their Comparative Charge Storage for Memristor Devices	Shubhro Chakrabarty, Abdulkarem HM Almwagani, Sachin Kumar, Mayank Kumar, Suvojit Acharjee, Alaaddin Al-Shidaifat, Alwin Poulouse, Turki Alsuwian	Micromachines	Q2	3.4
198	Perfect and broadband slotted Zr thin film solar absorber backed by Ti layer for visible and infrared spectrum	Abdulkarem HM Almwagani, Mya Mya Htay, Anwar AH Al-Athwary, Shobhit K Patel	Optical and Quantum Electronics	Q2	3

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199	Absorption Properties of a One-Dimensional Photonic Crystal with a Defect Layer Composed of a Left-Handed Metamaterial and Two Monolayer Graphene	Sofyan A Taya, Malek G Daher, Abdulkarem HM Almwagani, Ayman Taher Hindi, Ilhami Colak, Shobhit K Patel, Amrindra Pal	physica status solidi (a)		2
200	Identification of four detrimental chemicals using square-core photonic crystal fiber in the regime of THz	Abdulkarem HM Almwagani, Dana N Alhamss, Sofyan A Taya, Ayman Taher Hindi, Anurag Upadhyay, Shivam Singh, Ilhami Colak, Amrindra Pal, Shobhit K Patel	Journal of Applied Physics	Q2	3.2
201	Detection of blood cancer using highly sensitive surface plasmon resonance sensor based on MXene 2D nanomaterial	Abdulkarem HM Almwagani, Malek G Daher, Sofyan A Taya, Ayman Taher Hindi, Ilhami Colak, Amrindra Pal	Diamond and Related Materials	Q2	4.1
202	A surface plasmon resonance nanostructure containing graphene and BaTiO ₃ layers for sensitive deflection of organic compounds	Sofyan A Taya, Malek G Daher, Abdulkarem HM Almwagani, Ayman Taher Hindi, Ilhami Colak	Royal Society Open Science	Q2	3.5
203	Design and Analysis of Split ring resonator Engraved Metamaterial Broadband and high gain patch antenna for THz Applications	Abdulkarem HM Almwagani, Shobhit K Patel, Truong Khang Nguyen, Anwar AH Al-Athwary	Optik	Q2	3.1
204	One-dimensional metamaterial photonic crystals comprising gyroidal and hyperbolic layers as an angle-insensitive reflector for energy applications in IR regions	Abdulkarem HM Almwagani, Mai Medhat, Ahmed Mehaney, Ghassan Ahmed Ali, Muhammad Irfan, Hussein A Elsayed	The European Physical Journal Plus	Q2	3.4
205	Design of dipole array MIMO antenna for multiband and ultrawideband radiation applications in WiFi/Zigbee/WiMAX/satellite and mobile communications	Abdulkarem HM Almwagani, Vishal Sorathiya, Adam RH Alhawari	Applied Physics A	Q2	2.7
206	Highly sensitive sensor based on SPR nanostructure employing graphene and perovskite layers for the determination of blood hemoglobin concentration	Sofyan A Taya, Malek G Daher, Ilhami Colak, Shobhit K Patel, Amrindra Pal, Abdulkarem HM Almwagani, Ghassan Ahmed Ali	Optik	Q2	3.1
207	Total reflectivity for infrared radiation based on one-dimensional gyroidal metallic photonic crystals	Abdulkarem HM Almwagani, Hussein A Elsayed, Ahmed Mehaney, Arvind Sharma, Ashour M Ahmed, Ghassan Ahmed Ali, Walied Sabra	International Journal of Modern Physics B	Q3	1.7
208	Surface Plasmon Resonance Biosensor Based on STO and Graphene Sheets for Detecting Two Commonly Used Buffers: TRIS–Borate-EDTA and Dulbecco Phosphate Buffered Saline	Sofyan A Taya, Nael Doghmosh, Abdulkarem HM Almwagani, Ayman Taher Hindi, Ilhami Colak, Anas AM Alqanoo, Shobhit K Patel, Amrindra Pal	Plasmonics	Q3	3
209	Using Hocker and Burns numerical method to analyze the dispersion properties of a planar waveguide with an exponentially graded-index core layer for s-polarized light	Abdulkarem HM Almwagani, Aya J Hussein, Sofyan A Taya, Ayman Taher Hindi, Ilhami Colak, Anas AM Alqanoo, Shobhitkumar Patel, Amrindra Pal	Journal of Physics A: Mathematical and Theoretical	Q1	2.1
210	Detection of Virus SARS-CoV-2 Using a Surface Plasmon Resonance Device Based on BiFeO ₃ -Graphene Layers	Sofyan A Taya, Malek G Daher, Abdulkarem HM Almwagani, Ayman Taher Hindi, Samer H Zyoud, Ilhami Colak	Plasmonics	Q3	3
211	Design of Zr-Ge based perfect ultrawideband metamaterial solar absorber for UV to NIR region	Abdulkarem HM Almwagani, Mya Mya Htay, Jaymit Surve, Ammar Armghan, Khaled Aliqab, Shobhit K Patel	Optical and Quantum Electronics	Q2	3
212	Titanium disilicide, black phosphorus-based surface plasmon resonance sensor for dengue detection	Abdulkarem HM Almwagani, Partha Sarkar, Amrindra Pal, Gaurav Srivastava, Arun Uniyal, Adam RH Alhawari, Arjuna Muduli	Plasmonics	Q3	3

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213	Periodic and quasi-periodic one-dimensional phononic crystal biosensor: a comprehensive study for optimum sensor design	Abdulkarem HM Almwagani, Hamza Makhlof Fathy, Hussein A Elsayed, Ghassan Ahmed Ali, Muhammad Irfan, Ahmed Mehaney	RSC advances	Q2	3.9
214	A comparative study of 1D metallic (Au, Ag, Cu, Al) thermal tunable photonic crystal filter with exponentially graded thickness	Abdulkarem HM Almwagani, Dana N Alhamss, Sofyan A Taya, Melad Olaimat, Ilhami Colak, Shobhit K Patel	Indian Journal of Physics	Q3	2
215	A photonic crystal based on porous silicon as a chemical sensor for the detection of methanol compound	Abdulkarem HM Almwagani, Sofyan A Taya, Nael Doghmosh, Amrindra Pal, Anas AM Alkanoo, Adam RH Alhawari, Arvind Sharma, Ilhami Colak, Anurag Upadhyay	Indian Journal of Physics	Q3	2
216	Rectangular strip engraved circular patch and connected corrugated stub-based MIMO antenna for Wi-Fi/5G/WiMAX/satellite communication applications	Abdulkarem HM Almwagani, Vishal Sorathiya	Applied Physics A	Q2	2.7
217	Back reflector coating using a photonic crystal for highly efficient solar cells using a new metamaterial with the most extreme positive index of refraction	Sofyan A Taya, Sahar M AbuBaid, Dana N Alhamss, Shobhit K Patel, Ilhami Colak, Abdulkarem HM Almwagani	Indian Journal of Physics	Q3	2
218	One-Dimensional Phononic Crystals: A Simplified Platform for Effective Detection of Heavy Metals in Water with High Sensitivity	Abdulkarem HM Almwagani, Hamza Makhlof Fathy, Ghassan Ahmed Ali, Hussein A Elsayed, Ahmed Mehaney	Micromachines	Q2	3.4
219	A graphene-metasurface-inspired optical sensor for the heavy metals detection for efficient and rapid water treatment	Abdulkarem HM Almwagani, Jaymit Surve, Tanvirjah Parmar, Ammar Armghan, Khaled Aliqab, Ghassan Ahmed Ali, Shobhit K Patel	Photonics	Q3	2.4
220	A theoretical approach for a new design of an ultrasensitive angular plasmonic chemical sensor using black phosphorus and aluminum oxide architecture	Abdulkarem HM Almwagani, Suneet Kumar Awasthi, Ahmed Mehaney, Ghassan Ahmed Ali, Hussein A Elsayed, Hassan Sayed, Ashour M Ahmed	RSC advances	Q2	3.9
221	Photonic crystal nanostructure as a photodetector for NaCl solution monitoring: theoretical approach	Abdulkarem HM Almwagani, Hussein A Elsayed, Ahmed Mehaney, TA Taha, Ziyad Awadh Alrowaili, Ghassan Ahmed Ali, Walied Sabra, Sayed Asaduzzaman, Ashour M Ahmed	RSC advances	Q2	3.9
222	Design of a novel protein sensor of high sensitivity using a defective ternary photonic crystal nanostructure	Abdulkarem HM Almwagani, Sofyan A Taya, Malek G Daher, Adam RH Alhawari, Ilhami Colak, Shobhit K Patel	Silicon	Q3	3.4
223	A Scalogram-based CNN Ensemble Method with Density-Aware SMOTE Oversampling for Improving Bearing Fault Diagnosis	Muhammad Irfan, Saifur Rehman, Salim Mursal et al.,	IEEE Access	Q2	3.9
224	Improving Bearing Fault Identification by Using Novel Hybrid Involution-Convolution Feature Extraction With Adversarial Noise Injection in Conditional GANs	Muhammad Irfan, Saifur Rehman, Salim Mursal et al.,	IEEE Access	Q2	3.9
225	Ensemble learning approach for advanced metering infrastructure in future smart grids	Muhammad Irfan, Saifur Rehman, et al.,	PLOS ONE	Q2	3.7
226	Next-Gen brain tumor classification: pioneering with deep learning and fine-	Abdullah A Asiri, Muhammad Aamir, Tariq Ali,	PeerJ Comp Science		3.8

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	tuned conditional generative adversarial networks	Ahmad Shaf, Muhammad Irfan			
227	Robust estimation based nonlinear higher order sliding mode control strategies for PMSG-WECS	Awais Nazir, Safdar Abbas Khan, Malak Adnan Khan, Zaheer Alam, Imran Khan, Muhammad Irfan, Saifur Rehman	Bulletin of the Polish Academy of Sciences Technical Sciences	Q4	1.2
228	Enhancing Brain Tumor Diagnosis: Transitioning From Convolutional Neural Network to Involutional Neural Network	Abdullah A Asiri, Muhammad Aamir, Tariq Ali, Ahmad Shaf, Muhammad Irfan	IEEE Access	Q2	3.9
229	Enhanced Classification of Coffee Leaf Biotic Stress by Synergizing Feature Concatenation and Dimensionality Reduction	Muhammad Irfan, Saifur Rehman, et al.,	IEEE Access	Q2	3.9
230	Enhancing Ransomware Attack Detection Using Transfer Learning and Deep Learning Ensemble Models on Cloud-Encrypted Data	Amardeep Singh, Zohaib Mushtaq, Hamad Ali Abosaq, Salim Nasar Faraj Mursal, Muhammad Irfan	Electronics	Q2	2.9
231	Advancing Brain Tumor Classification through Fine-tuned Vision Transformers: A Comparative Study of Pre-trained Models	Abdullah A Asiri, Muhammad Aamir, Tariq Ali, Ahmad Shaf, Muhammad Irfan	Sensors	Q2	3.9
232	Analyzing Extreme Temperature Patterns in Subtropical High-lands Climates: Implications for Disaster Risk Reduction Strategies	Abdulnoor Ali Jazem Ghanim, Muhammad Naveed Anjum, Ghulam Rasool, Saif Ullah, Muhammad Irfan	Sustainability	Q2	3.9
233	Assessing spatiotemporal trends of total and extreme precipitation in a subtropical highland region: A climate perspective	Abdulnoor Ali Jazem Ghanim, Muhammad Naveed Anjum, Ghulam Rasool, Saifullah, Muhammad Irfan, Saifur Rahman	PLOS ONE	Q2	3.7
234	Modeling and Optimization of Isolated Combined Heat and Power Microgrid for Managing Universiti Teknologi PETRONAS Energy	Elnazeer Ali Hamid Abdalla, Mahesh Kumar, Izzeldin Idris Abdalla, Salah Eldeen Gasim Mohamed, Amir Mahmood Soomro, Muhammad Irfan	IEEE Access	Q2	3.9
235	Enhancing fine retinal vessel segmentation: Morphological reconstruction and double thresholds filtering strategy	Faisal Althobiani, Saleh Mohammed Ghonaim, Muhammad Irfan	PLOS ONE	Q2	3.7
236	Effect of Ionic Liquids on Mechanical, Physical, and Antifungal Properties and Biocompatibility of a Soft Denture Lining Material	Mabkhoot Alsaieri, Khumara Roghani, Saad Liaqat, Ali S. Alkorbi, Faiza Sharif, Muhammad Irfan	ACS Omega	Q2	4.1
237	An Improved Flood Susceptibility Assessment in Jeddah, Saudi Arabia Using Advanced Machine Learning Techniques	Abdulnour Ghanim, Ahmad Shaf, Tariq Ali, Maryam Zafar, Ahmed Al-Areeq, Saleh Alyami, Muhammad Irfan, Saifur Rahman	Water	Q2	3.4
238	Brain Tumor Detection and Classification Using Fine-Tuned CNN with ResNet50 and U-Net Model: A Study on TCGA-LGG and TCIA Dataset for MRI Applications	Asiri, A.A.; Shaf, A.; Ali, T.; Aamir, M.; Irfan, M	Life	Q1	3.2
239	S.M. Exploring the Power of Deep Learning: Fine-Tuned Vision Transformer for Accurate and Efficient Brain Tumor Detection in MRI Scans	Asiri, A.A.; Shaf, A.; Ali, T.; Aamir, M.; Irfan, M	Diagnostics	Q2	3.6
240	Interference mitigation in intentional jammers aided non-uniform heterogeneous cellular networks	Saleh Mohammed Ghonaim, Samar Khan, Faisal Althobiani, Shadi Alghaffari, Sheraz Khan, Muhammad Irfan	PLOS ONE	Q2	3.7

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241	Testing of Magnetic ZnO/MgFe ₂ O ₄ Heterostructures for Photocatalytic Removal of Synthetic Dye Pollutants from Wastewater,”	Muhammad Shoaib, Muhammad Adnan Munir, Muhammad Yasin Naz ,Ghulam Abbas, Muhammad Irfan, Saifur Rahman, Abdalnour Ali Jazem Ghanim	Water, Air and Soil Pollution	Q2	2.9
242	Production of combustible fuels and carbon nanotubes from plastic wastes using an in-situ catalytic microwave pyrolysis process	Muhammad Irfan, Rishmail Saleem, Bilal Shoukat, Hammad Hussain	Scientific Reports	Q2	4.9
243	Multi-region electricity demand prediction with ensemble deep neural networks	Muhammad Irfan, Ahmad Shaf, Tariq Ali, Mariam Zafar, Saifur Rahman	PLOS ONE	Q2	3.7
244	Statistical prediction and sensitivity analysis of kinetic rate constants for efficient thermal valorization of plastic waste into combustible oil and gases	Muhammad Irfan, Rao Adeel Un Nabi, Hammad Hussain, Muhammad Yasin Naz	Heliyon	Q2	3.7
245	Response Surface Methodology for the Synthesis and Characterization of Bio-Oil Extracted from Biomass Waste and Upgradation Using the Rice Husk Ash Catalyst	Muhammad Irfan, Syed Ali Ghalib, Sharjeel Waqas	ACS Omega	Q2	4.1
246	Cactus-Shaped Frequency Reconfigurable Antenna for Sub 10 GHz Wireless Applications	Muhammad Irfan, Wasi Ur Rehman Khan, Sadiq Ullah, Naveed Mufti, Muhammad Fawad Khan, Rizwan Ullah, Usman Ali, Fazal Muhammad, Faisal Althobiani, Mohammed Alshareef, Shadi Alghaffari, Saifur Rehman, VR Shamji	Computer Systems Science & Engineering	Q1	4
247	Testing of magnetic and dielectric traits of microwave plasma treated NiCuZn spinel ferrites for efficient energy storage and high-frequency applications	Muhammad Adnan Munir, Muhammad Yasin Naz, Shazia Shukrullah, Muhammad Umar Farooq, Kashif Kamran, Muhammad Irfan, Abdalnour Ali Jazem Ghanim	Materials Science and Engineering: B	Q2	3.6
248	Multi-Level Deep Generative Adversarial Networks for Brain Tumor Classification on Magnetic Resonance Images.	Abdullah A Asiri, Ahmad Shaf, Tariq Ali, Muhammad Aamir, Ali Usman, Muhammad Irfan, Hassan A Alshamrani, Khlood M Mehdar, Osama M Alshehri, Samar M Alqhtani	Intelligent Automation & Soft Computing	Q2	2.7
249	Numerical sensitivity analysis of temperature-dependent reaction rate constants for optimized thermal conversion of high-density plastic waste into combustible fuels	Muhammad Irfan, Rao Adeel Un Nabi, Hammad Hussain, Muhammad Yasin Naz, Shazia Shukrullah, Hassan Abbas Khawaja, Saifur Rahman, Faisal Althobiani	The Canadian Journal of Chemical Engineering	Q3	2.1
250	Impact of Retinal Vessel Image Coherence on Retinal Blood Vessel Segmentation	Toufique A Soomro, Nisar Ahmed Jandan, Ahmed Ali, Muhammad Irfan, Saifur Rahman, Waleed A Aldhabaan, Abdulrahman Samir Khairallah, Ismail Abuallut	Electronics	Q2	2.9
251	Fault Diagnosis Strategy for a Standalone Photovoltaic System: A Residual Formation Approach	Zaheer Alam, Malak Adnan Khan, Zain Ahmad Khan, Waleed Ahmad, Imran Khan, Qudrat Khan, Muhammad Irfan, Grzegorz Nowakowski	Electronics	Q2	2.9
252	Beyond the Stage: Exploring the Transmedial Adaptation of “to be or not to be” in Hamlet on Rooftop	MA Malik, M Irfan, MU Ayub	Global Social Sciences Review, VIII		
253	Machine Learning-Based Models for Magnetic Resonance Imaging (MRI)-Based Brain Tumor Classification	Abdullah A Asiri, Bilal Khan, Fazal Muhammad, Hassan A Alshamrani, Khalaf A Alfills	Intell. Autom. Soft Comput	Q2	2.7

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		Alshamrani, Muhammad Irfan, Fawaz F Alqhtani			
254	Automatic Detection of Outliers in Multi-Channel EMG Signals Using MFCC and SVM	Muhammad Irfan, Khalil Ullah, Fazal Muhammad, Salman Khan, Faisal Althobiani, Muhammad Usman, Mohammed Alshareef, Shadi Alghaffari, Saifur Rahman	Intell. Autom. Soft Comput	Q2	2.7

Table 3. Analysis of Journal Publications

Ph.D faculty members	Total Journal Papers	Papers/ Ph.D faculty member	Q1	Q2	Q3	Q4
16	254	254/16 = 15.87	92 (36.2 %)	98 (38.6)	42 (16.5 %)	11 (4.3 %)

The EE faculty members have also attended international conferences in 2023. The details are listed in Table 4.

Table 4. Conference Publication (2023)

No.	Article Title	Authors	Conference Title	Date
1.	Smart Solar Greenhouse Based PLDC	Ali Abosaq, A Belahrith, Abdullah Aldosari, Ahmad Alzahrani	Proceedings of the 11th IEEE International Conference on Smart Grid, Paris, France	June 2023
2.	Investigation of Multiple Sudoku PV Array Reconfiguration Architectures under Partial Shading	Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, Belqasem Aljafari, Nnamdi Nwulu, Renu Sharma, Karthik Balasubhramanian	Proceedings of the 11th IEEE International Conference on Smart Grid, Paris, France	June 2023
3.	A Reliable Technique for Power Generation Enhancement in Unsymmetrical PV Arrays during Partial Shading	Belqasem Aljafari, Sudhakar Babu Thanikanti, Karthik Balasubhramanian	Proceedings of the 11th IEEE International Conference on Smart Grid, Paris, France	June 2023

Research Citations:

The research citations of each faculty member for the last 05 years are shown in Table 5. In 2023, research papers of EE faculty members were cited **6308 times**. The citation data has been collected from the Google Scholar profiles.

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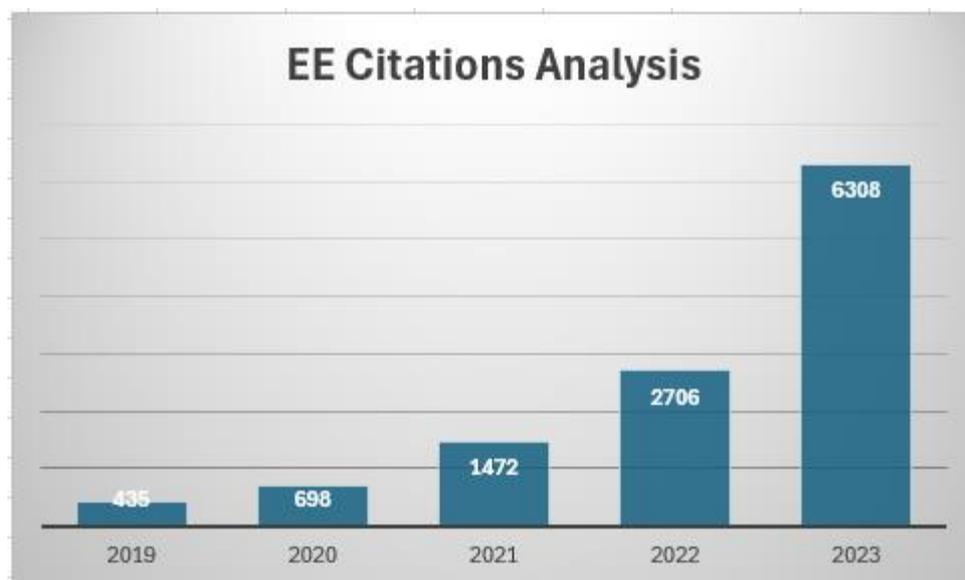


Table 5. Research Citations

Sr. No	Faculty Member Name	Total Citations in 2019	Total Citations in 2020	Total Citations in 2021	Total Citations in 2022	Total Citations in 2023	Google Scholar Profile Link
1	Dr. Saleh AlMasabi	25	33	52	29	132	https://scholar.google.com/citations?hl=en&user=Y-KKKNgAAAAJ&view_op=list_works&alert_preview_top_rm=2&sortby=pubdate
2	Dr. Turki Alsuwian	0	2	20	70	215	https://scholar.google.com/citations?view_op=search_authors&hl=en&mauthors=alsuwian&btnG=
3	Dr. Mohammed Saeed Jalalah	43	89	294	722	1010	https://scholar.google.com/citations?user=PIdo3ziAAAAJ&hl=ar
4	Dr. Ahmad Alzaharani	96	132	162	186	269	https://scholar.google.com/citations?hl=en&user=LRPIIHcAAAAJ&view_op=list_works&sortby=pubdate
5	Dr. Belqasem Aljafari	8	13	26	110	361	https://scholar.google.com/citations?hl=en&user=JWrjzogAAAAJ&view_op=list_works&gmla=AJsN-F7fkveoyPXyl4usxyD0uOLB1543whNLdAngqUdO_5UNNdNaAVLa-nNn27c_ynZV-nkPpdmaKkOWi41a-fbxC0sjtrq910rbYNKmH3YuyoYKYMciBG8

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6	Dr. Hassan Algadi	120	177	291	560	1904	https://scholar.google.com/citations?hl=en&user=7AYbQP8AAAAJ&view_op=list_works&sortby=pubdate
7	Dr. Tareq Alkareri	0	0	5	10	20	https://scholar.google.com/citations?user=H-WMgnQAAAAJ&hl=en
8	Dr. Hisham Alghamdi	9	11	14	37	54	https://scholar.google.co.uk/citations?user=htOXtSkAAAAJ&hl=en
9	Dr. Muhammad Irfan	93	120	412	885	1312	https://scholar.google.com/citations?user=30vr9eQAAAAJ&hl=en
10	Dr. Abdulkarim Hussein Mohammed Almamwani	4	14	29	104	352	https://scholar.google.com/citations?user=5GjnleAAAAJ&hl=ar
11	Dr. Adam Reda Alhawari	37	93	97	143	165	https://scholar.google.com/citations?hl=en&user=y50D-98AAAAI&view_op=list_works&gmla=AILGF5VxXMeB3a8wz_IqYrf0pcF5WfzcHxq_0h8Gv5FAoPnT5dq80Vz-Nc_vhGcWvrpYLwrTXhzH3jLfmyDBaSrF4al-M-mQIXP8jEA
12	Dr. Saifur Rahman	5	24	108	295	457	https://scholar.google.com/citations?user=thNMzNYAAAAJ&hl=en
13	Dr. Aymen Alhnidi	1	2	12	39	56	https://scholar.google.com/citations?hl=ar&user=Tvq-g3AAAAAJ&view_op=list_works&sortby=pubdate
14	Dr. Seif Shebel	2	3	0	1	1	https://scholar.google.com/citations?user=S3kqtNIAAAAAJ&hl=ar#d=gsc_md_hist

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Total Citations	435	698	1472	2706	6308	
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Research Grants:

The EE faculty members are keen to apply for research grants. The main source of research grants is the Deanship of Scientific Research (DSR), Najran University KSA. The DSR provides the opportunity to every Ph.D faculty member to get research grants in every year. Furthermore, the Ministry of Education KSA, Research Development and Innovation Authority (RDIA) also open research grants occasionally. The research grants secured by EE faculty members in the year 2023 are given in Table 6.

Table 6. Research Grants in Year 2023

No.	Grant Title (Project Title)	Project PI	Grant Awarded By	Grant Amount	Grant Acceptance (Released) Date	Grant Duration
1.		Dr. Turki Alsuwian	Institutional funding committee, Ministry of Education KSA	90,000 SAR	Feb 2023	01 Year
2.		Dr. Belqasem Aljafari	Institutional funding committee, Ministry of Education KSA	90,000 SAR	Feb 2023	01 Year
3.		Dr. Tareq Alkareri	Institutional funding committee, Ministry of Education KSA	90,000 SAR	Feb 2023	01 Year
4.	Development of Sustainable Systems for Smart City Applications	Dr. Muhammad Irfan	Institutional funding committee, Ministry of Education KSA	90,000 SAR	Feb 2023	01 Year
5.	Advanced materials and devices for enhanced removal of contaminants from wastewater and for catalysis, energy storage, and production applications	Dr. Mohammed Saeed Jalalah	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year
6.	Nanocomposite materials for energy storage and energy production applications	Dr. Mohammed Saeed Jalalah	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
7.	Synthesis of mesoporous nanomaterials and nanocomposites for catalysis, renewable energy, and storage applications	Dr. Mohammed Saeed Jalalah	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
8.		Dr. Hesham Alghamdi	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year

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9.		Dr. Hesham Alghamdi	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
10.		Dr. Hesham Alghamdi	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
11.	Blockchain and AI enabled false data injection attacks detection	Dr. Saleh Almasabi	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
12.		Dr. Ahmed Alzahrani	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year
13.		Dr. Ahmed Alzahrani	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
14.		Dr. Ahmed Alzahrani	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
15.		Dr. Hassan Alqadi	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year
16.		Dr. Hassan Alqadi	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
17.		Dr. Hassan Alqadi	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
18.		Dr. Belqasem Aljafari	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
19.		Dr. Belqasem Aljafari	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
20.	Advanced Antenna Designs for Microwave, mmWave and THz Communication	Dr. Abdulkarem Almawjani	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year

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21.	Metamaterial-inspired graphene based optical sensors for biomedical, and environmental applications	Dr. Abdulkarem Almajani	Deanship of Scientific Research, Najran University Saudi Arabia	70,000 SAR	Feb 2023	01 Year
22.	Metamaterial Inspired Solar Energy Absorber with Ultrawideband, Large Angular and Polarisation Independent Properties	Dr. Abdulkarem Almajani	Deanship of Scientific Research, Najran University Saudi Arabia	45,000 SAR	Feb 2023	01 Year
23.	Date Fruit Classification using Deep Learning Convolutional Neural Network	Dr. Abdulkarem Almajani	Deanship of Scientific Research, Najran University Saudi Arabia	8,000 SAR	Feb 2023	01 Year
24.	Development of MXene/2D material based highly efficient and tunable optical biosensor research for a diverse set of applications in the field of biomolecule sensing	Dr. Adam Alhawri	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year
25.	Computational Analysis of Multiple Antenna System for Inter and Intra Vehicular Communication Applications	Dr. Adam Alhawri	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
26.	Development of highly efficient solar absorber and infrared devices for renewable energy applications using MXene and two-dimensional material	Dr. Adam Alhawri	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
27.	Monitoring System for Industrial Automation using Zigbee Techniq	Dr. Adam Alhawri	Deanship of Scientific Research, Najran University Saudi Arabia	8,000 SAR	Feb 2023	01 Year
28.	Applications of optical fiber technology in biosensors	Dr. Aymen Alhnidi	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year
29.	Metal- dielectric slab structures for optical sensor-based on surface plasmon resonance	Dr. Aymen Alhnidi	Deanship of Scientific Research, Najran University Saudi Arabia	45,000 SAR	Feb 2023	01 Year
30.	Applications of optical fiber technology in biosensors	Dr. Aymen Alhnidi	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year
31.	Developing modern techniques for plastic waste management, energy management, water treatment, communication systems and healthcare	Dr. Muhammad Irfan	Deanship of Scientific Research, Najran University Saudi Arabia	100,000 SAR	Feb 2023	01 Year
32.	Developing a Modern System for Photocatalytic Treatment of Wastewater	Dr. Muhammad Irfan	Deanship of Scientific Research, Najran University Saudi Arabia	90,000 SAR	Feb 2023	01 Year

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33.	Developing modern systems for applications in plastic waste to energy conversion, load forecasting and network security	Dr. Muhammad Irfan	Deanship of Scientific Research, Najran University Saudi Arabia	75,000 SAR	Feb 2023	01 Year
34.	Modern Systems Applications in Healthcare, Communication, Materials and Waste Water Treatment	Dr. Saifur Rahman	Deanship of Scientific Research, Najran University Saudi Arabia,	100,000 SAR	Feb 2023	01 Year
35.	AI for Modern Biomedical Systems	Dr. Saifur Rahman	Deanship of Scientific Research, Najran University Saudi Arabia,	90,000 SAR	Feb 2023	01 Year
36.	Advanced Research on Wastewater Treatment, Waste Management, Energy Management and Communication Systems for Smart Cities Applications	Dr. Saifur Rahman	Deanship of Scientific Research, Najran University Saudi Arabia,	75,000 SAR	Feb 2023	01 Year

Community Service:

The Research & Community Service Committee is committed to the promotion of faculty participation in community service activities through the organization of various workshops and seminars. Each year, the committee encourages faculty members to participate in delivering workshops and scientific seminars for faculty members and students of EE department. Table 7 shows community service activities arranged by EE faculty members in 2023.

Table 7. Community Service Activities in Year 2023

No.	Title of the seminars/workshops organized	Name of Presenter	Venue	Date
1	Research Methodology: A step by step guidance	Dr. Muhammad Irfan	Najran University	20 March 2023
2	A prototype development of a portable diagnostic condition monitoring tool for detecting bearing defects in AC motors	Dr. Muhammad Irfan	Amity University, India	09 July 2023
3	Introduction to Mendeley	Dr Abdulkarem Almawgani	Najran University	20 Oct 2022
4	Python Introduction for Engineers	Dr. Seif Shebl	Najran University	
5	PV Power Processing	Dr. Ahmad Alzahrani	Najran University	
6	Introduction to wind energy conversion system	Dr. Ahmad Alzahrani	Najran University	January 2023
7	Participation in Agriculture Hackathone-	Dr. Ahmad Alzahrani	Ministry of Agriculture	28 Sep 2023
8	Technical visit of students to Granite Factory in Najran	Dr. Ahmad Alzahrani	to Granite Factory in Najran	11 Sep 2023
9	How to use CLOSO software	Dr. Saifur Rahman	Najran University	03 Nov 2022
10	E-nose and their applications	Dr. Saifur Rahman	Najran University	

Research Awards and Achievements:

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- EE Department has received the 1st position in the Najran University for publishing the highest number of research papers in Web of Science for the years 2021 and 2022. The research publications data for 2023 reflects that the EE department will retain the 1st position in the year 2023 as well.
- Some Researchers of the EE department were recognized in 2023 by the Stanford University list among the top 02 % of researchers in the world.

Concluding Remarks:

- The 05 years research plan of EE department targets to publish minimum 15 journal papers. This target has been achieved and research performance is excellent.
- The 05 years research plan of EE department targets to get minimum 05 research grants in every year. This target has been achieved and the research performance is satisfactory.
- The 05 years research plan of EE department targets to organize minimum 10 technical workshops/seminars/trainings in EE department. This target has been achieved.

Report Prepared By:	Dr. Muhammad Irfan  Signature: Date: 09 Feb 2024	
Reviewed By:	Dr. Ahmad Alzahrani  Signature: Date: 11 Feb 2024	Dr. Mohammed Saeed Jalalah Signature:  Date: 11 Feb 2024
	Approved by the EE Research & Community Service Committee Date: 12 Feb 2024	