Research plan for Energy and Renewable Energies Technology Center for the academic year 2020-2021

| No | Researcher Name | Research Title |
|----|--|---|
| 1 | Hussein A. Kazem, Ali H A Al-Waeli, Miqdam T Chaichan, K Sopian | Modelling improvement and experimental validation of solar cells considering dust pollution. |
| 2 | Hussein A. Kazem, Jabar Yousif, Miqdam T Chaichan, Ali H A Al-Waeli, K Sopian | Comparative study of grid-connected photovoltaic output using Principal Component Analysis and Recurrent Neural approaches based on a measured dataset |
| 3 | Hussein A. Kazem, Miqdam T Chaichan, Ali H. A. Al-Waeli, K Sopian | Comparison and evaluation of PV/T system with hybrid collector: an experimental study |
| 4 | Mohammed A. Fayad Amerah A. Radhi | Influence of environment-friendly novel fuel additives on soot nanoparticles characteristics and engine performance in CI diesel engine |
| 5 | Mohammed A. Fayad Bashar R Unis Salman Hussien Omran | Effect of oxygenated fuels on morphology and oxidation reactivity of soot particulate emissions in modern diesel engine |
| 6 | Mohammed A. Fayad Marwa K. Abood Hind A. Al salihi | Influence of various injection timings and nanoparticles additive to the biodiesel-diesel blends on the engine performance and emission characteristics in diesel engine |
| 7 | Marwa K. Abood Mohammed A. Fayad Hind A. Al salihi Hassin Ali Abdulmajeed Salbi | Effect of zno nano particle deposition on porous silicon solar cell |
| 8 | Marwa K. Abood Evan T Salim Hind A. Al salihi | Synthesis and characterization of photoconductive solar cell employing Nb205 nanopaste. |
| 9 | W K Alania, J. Zhengb, M.A. Fayada, Lei Leib | Enhancing the fuel saving and emissions reduction of light-duty vehicle by a new design of air conditioning worked by solar energy |
| 10 | W K Alania, | Yttrium barium copper oxide application A review |
| 11 | W K Alania, | Ice and Heat Energy Generation panel (IHEGP |
| 12 | Bashar R. Al-ogaidi Mohamad Alsaadi Mehmet Bulut | Improving the dynamic behavior of aramid/carbon reinforced epoxy using graphene nano-pellets. |
| 13 | Thamer Adnan Abdullah Tatjana Juzsakova Sanaa A. Hafad Rashed Taleb Rasheed Noor Al-Jammal Le Phuoc Cuong Ali Dawood Salman1 Redey Akos | Article Review: Polymer Nanocomposites for Oil Removal from Water |

| | Endre Domokos Igor Cretescu | |
|----|--|---|
| 14 | Salman Hussien Omran Amjed Barzan Al-Hadithi | Development statistical process control charts using artificial intelligent techniques |
| 15 | Dahir Abbas Reda Ismael Hadi Challoob Salman Hussien Omran | The use of time series to predict defective percentage is an applied study in the Ishtar fireplace laboratory |
| 16 | Thamer Adnan Abdullah Tatjana Juzsakova Sanaa A. Hafad Rashed Taleb Rasheed Noor Al-Jammal Le Phuoc Cuong Ali Dawood Salman1 Redey Akos Endre Domokos Igor Cretescu | Preparation, Characterization of V2O5 Nanoparticles at Different Annealing Temperatures and Their Application in Removal of Methylene Blue from Water |
| 17 | Thamer Adnan Abdullah Tatjana Juzsakova Sanaa A. Hafad Rashed Taleb Rasheed Noor Al-Jammal Le Phuoc Cuong Ali Dawood Salman1 Redey Akos Endre Domokos Igor Cretescu | Preparation, Characterization of MnO2-Based Nanoparticles at Different Annealing Temperatures and Their Application in Dye Removal from Water. |
| 18 | Amerah Abbas Radhi | Investigation of electrocoagulation effect on the removal of COD, TOC from waste water |
| 19 | Amerah Abbas Radhi | Comparison of sand filter and granular activated carbon filter in removing organic matter |
| 20 | Slafa I. Ibrahim | Nonlinear properties of Calcein-W dissolved in Methanol. |
| 21 | Slafa I. Ibrahim | Nonlinear properties of liquid anthocyanin dye. |
| 22 | Salam Waley Shneen Moafaq K.S. Al-Ghezi Roshen T A Hamdi | Review- Design and performance of PV Thermal System. |
| 23 | Roshen T A Hamdi Salam Waley Shneen Moafaq K.S. Al-Ghezi | The Influence of solar chimney parameters on its efficiency and operation |
| 24 | Moafaq K.S. Al-Ghezi Roshen T A Hamdi Salam Waley Shneen | The Influence of Temperature and irradiance on Performance of Solar Cells In the Middle of Iraq. |
| 25 | Salam Waley Shneen | Simulation Model of Single Phase PWM rectifier by Using MATLAB/Simulink |
| 26 | Salam Waley Shneen | Simulation Model of Three Phase PWM rectifier by Using MATLAB/Simulink |
| 27 | salam waley shneen1 Ghada Adel Aziz | BBO Tuned FLC for stability of TCP network |
| 28 | Ghada Adel Aziz1 salam waley shneen | Advanced Optimal for stability of TCP network |
| 29 | salam waley shneen Manal Kadhim Oudah Mohammed Qasim Sulttan | BBO Tuned PI Controller for stability of TCP network |
| 30 | salam waley shneen Mohammed Qasim Sulttan Manal Kadhim Oudah | Design and Implementation Stability System for TCP network |

| 31 | Shaimaa bassim khalf | Quantum chemical elucidation on corrosion inhibition efficiency of Schiff base : DFT investigations supported by weight loss and SEM techniques |
|----|----------------------|---|
| | | by weight loss and SEIVI techniques |