

Proceedings of the International Conference on Innovative Applied Energy



14–15 March 2019

Oxford, United Kingdom



Editor

Faouzi Hidoussi

ISBN (978-1-912532-05-6)

Preface

The volume contains the proceedings of the international conference on Innovative Applied Energy (IAPE'19). The international conference on Innovative Applied Energy represents an ideal opportunity for the students and the researchers from both industrial and academic domains having as main objective to present their latest ideas and research results in any one of the IAPE'19 topics.

The energy resource consumption has doubled since the beginning of the century and the demand growth with the fast development in industrial and telecommunication sectors. To respond to the rising demand for energy resources, new efficient infrastructures for production, storage, transport and use of energy are necessary. **The International Conference on Innovative Applied Energy (IAPE'19)** aims to investigate innovation applications and last researches in the areas of energy production, alternative and renewable energy supply, energy savings analysis, optimization of energy processes and the environmental impacts of energy production.

The IAPE'19 conference is a scientific event which gathered leading researchers and practitioners who presented their ideas to more than 500 attendees. Attendees have provided high quality contributions reviewed by a program committee featuring renowned international experts on a broad range of knowledge management topics. More than 985 papers were submitted to the IAPE'19 conference from authors of many countries and continents. Two or three reviewers were assigned to each paper and according to these reviews, 475 papers were accepted which makes acceptance rate of 48%.

We are grateful to the King's Centre, Oxford, United kingdom, for hosting this conference. Also, we would like to express our gratitude to the Chairs, Program Committee, External Reviewers, Organizing Committee and the keynote speakers for their wonderful work and efforts. Finally, we would like to thank all the participants and sponsors hoping to meet them soon for other collaboration in scientific events.

Sincerely yours,

Faouzi Hidoussi

IAPE'19 Chair

Program Committee IAPE'19

General and Management Chair

Faouzi Hidoussi, Head of Corgascience Limited, United Kingdom

International Advisory Board

Prof. Jiří Jaromír Klemeš, Brno University of Technology – VUT Brno, Czech Republic

Prof. Tianshou ZHAO, HKUST Energy Institute, Hong Kong

Prof. Yiu Fai Tsang, The Education University of Hong Kong

Prof. Tariq Muneer, Energy Engineering at Edinburgh Napier University, United Kingdom

Prof. Soteris Kalogirou, Cyprus University of Technology, Limassol, Cyprus

Technical Program Committee

Aouss Gabash, Ilmenau University of Technology, Germany

Albandari Alsumayt, Nottingham Trent University, United Kingdom

Kala Meah, York College of Pennsylvania, USA

Ghanim Putrus, Northumbria University, United Kingdom

Wai Lok Woo, Newcastle University, United Kingdom

Jean-Marc Andreoli, Naver Labs Europe, France

Abbas Amini, Western Sydney University, Australia

Behnaz Rezaie, University of Idaho, Moscow, USA

Kennedy Aganah, Tuskegee University, USA

Hany E.Z.Farag, York University, Canada

Beatrice Smyth, Queen's University Belfast, United Kingdom

Asri Gani, Toyohashi University of Technology, Japan

Fabiano Pallonetto, University College Dublin, Ireland

Hassan Quadrat-Ullah, University of York, Canada

Ivana Dusparic, Trinity College Dublin, Ireland
Kristen Cetin, Iowa State University, USA
Chunjiang An, University of Regina, Canada
Illa Kolani, BUPT, China
Adel Al-Hussaini, Centre for Osmosis Research & Applications, University of Surrey, UK
Hani Alzaid, King Abdulaziz City for Science and Technology, Australia
Hossam A.Gabbar, University of Ontario Institute of Technology, Canada
Sherin Aly, Virginia Tech, USA
Paolo Crippa, Università Politecnica delle Marche, Italy
Dhayaa Khudher, Brunel University London, United Kingdom
Diego Arcos-Aviles, Universidad de las Fuerzas Armadas ESPE, Ecuador
Sarah Al-Shareeda, The Ohio State University, USA
Omar Abdel-Rahim, Utsunomiya University, Japan
Larry Hughes, Dalhousie University, Canada
Norma Alias, Universiti Teknologi Malaysia, Malaysia
Shilpi Birla, Manipal University, India
Haider Al-Mashhadi, University of Basrah, Iraq
Abdulaziz Alzubaidi, Umm Alqura University, Saudi Arabia
Mayank Chaturvedi, Graphic Era University, Dehradun, India
Omar Abdalla, University of Helwan, Egypt
Jafar Alzubi, Al-Balqa Applied University academia, Jordan
Amarendra Babu Akella, Jawaharlal Nehru Institute of Advanced Studies (JNIAS), India
Noura Al Nuaimi, UAEU, United Arab Emirates
K. Hemant Reddy, BPUT, Rourkela, ORISSA, India
Alex Pappachen James, Nazarbayev University, Kazakhstan
Helmi Aloui, University of Sfax, Tunisia
Sandhya Aneja, Universiti Brunei Darussalam, Brunei Darussalam
Sunil Nangran, VNIT Nagpur, India
Ali Abdul Razzaq, University of Kerbala, Iraq
Mohd Amir Abas, Universiti Kuala Lumpur, Malaysia
Kavitha Ammayappan ,Robert Bosch Engineering and Business Solutions PvtLtd, India
Rana Alnashwan, University College Cork, Ireland
Muayed AL-Huseiny, University of Wasit, Iraq

Muhammad Hafidz Fazli Bin Md Fauadi, Universiti Teknikal Malaysia Melaka, Malaysia
Ramesh Battula, Malaviya National Institute of Technology Jaipur, India
Shavan Askar, Duhok Polytechnic University, Iraq
Omar Abdulwahabe Mohamad, University of Politehnica in Bucharest, Romania
Lalit Chettri, Sikkim Manipal University, India
Zainal Ambri Abdul Karim, Universiti Teknologi PETRONAS, Malaysia
Shashikant Shantilal Patil, SVKM NMIMS Mumbai, India
Sana Belguith, University of Auckland, New Zealand
Mostafa Ahmadi, Islamic Azad University Science and Research Branch, Iran
Emadeddin Hussein, Memorial University of Newfoundland, Canada
Hussain Saleem, University of Karachi, Pakistan
Carlos A. Astudillo, State University of Campinas, Brazil
Adlan Ali, Universiti Teknikal Malaysia Melaka, Malaysia
Fatimah Salim, Universiti Teknologi Malaysia (UTM), Malaysia
Kapal Dev, Politecnico di Milano, Italy
Ismail Yusuf, Lamintang Education & Training (LET) Centre, Batam, Indonesia
Belal Alshaqqa, University of Science and Technology of Oran, Algeria
Karthikeyan Ramasamy, Anna University, Chennai, India
Michel Owayjan, American University of Science & Technology, Lebanon
Jehan Janbi, Taif University, Saudi Arabia
In Seop Na, Chonnam National University, Korea
Muhammad Anshar, Hasanuddin University, Indonesia
Onye Erim, Liverpool John Moores University Electronics and Electrical Engineering, UK

Table of Contents

Plenary Speaker: [The role of Energy Footprints to Reduce Emissions and Efluentes and to support the Support Circular Economy](#)
Prof. Jiří Jaromír Klemeš

Keynote Talks

- Key Talk 1 (ID: 1)** [De-Carbonizing Heat Supplies in Urban Areas](#)
Roberto Garay Martinez
- Key Talk 2 (ID: 2)** [Flexibility in Energy Infrastructure.](#)
Ingo Weidlich.
- Key Talk 3 (ID: 4)** [Renewable Energy Storage and its Application for Cooling/Heating and Desalination Cycles.](#)
Muhammad Wakil Shahzad.
- Key Talk 4 (ID: 6)** [Promoting the Salinity Gradient Power Plant from the Laboratory to the Field Application.](#)
Ali Altaee.
- Key Talk 5 (ID: 20)** [Location optimization of renewable energy farms for electricity generation using different multi criteria decision making \(MCDM\) methodologies.](#)
Ali Mostafaeipour.
- Key Talk 6 (ID: 21)** [Establishment Support System for installation of PV Considering Historical Cityscape Landscape Using GIS.](#)
Atsushi Shiota.
- Key Talk 7 (ID: 22)** [Modeling Partially Premixed Turbulent CH₄ Flames Using A Reaction Progress Variable.](#)
Jim Kok and Marc Woolderink.
- Key Talk 8 (ID: 30)** [Direct frequency conveyerion between optical and microwave fields for 5G technologies.](#)
Byoung Ham.
- Key Talk 9 (ID: 35)** [A Technological Overview of Anaerobic Biofilm Digester for Greenhouse Gas Emission, Economics and Energy Efficiency in Municipal Solid Waste Leachate Treatment in Malaysia.](#)
Fatihah Suja.
- Key Talk 10 (ID: 37)** [Numerical Analysis of Thermal Enhancement in Diffusers Fitted with Swirl Generators.](#)
Ehan Shukri.
- Key Talk 11 (ID: 40)** [Graphene Materials via Electrochemical Approaches for Energy Storage.](#)
Junzhong Wang.

- Key Talk 12 (ID: 41)** [Household energy expenditure: segmentation procedure with a focus on energy poverty.](#)
Giorgio Besagni.
- Key Talk 13 (ID: 46)** [Passive heating and cooling techniques for buildings: the role of the occupants in their performance.](#)
Ivan Oropeza-Perez.
- Key Talk 14 (ID: 47)** [Alternatives fuels and self-reducing agents for high efficiency green pig iron production.](#)
Jose Adilson de Castro.
- Key Talk 15 (ID: 48)** [Recent Progress in Piezoelectric Energy Harvesting from Highway Traffic.](#)
Jian-Qiao Sun, Cheng Chen, Amir Sharafi, Tian-Bing Xu and Atousa Yazdani.
- Key Talk 16 (ID: 52)** [Lithium Recovery from Seawater and Batteries by Innovative Electrodialysis using Lithium Ionic Superconductor Membrane.](#)
Tsuyoshi Hoshino.
- Key Talk 17 (ID: 53)** [When sustainable urban energy planning matters: The case of urban housing and floor area ratio variations.](#)
Ali Cheshmehzangi.
- Key Talk 18 (ID: 59)** [Ramifications of carbon footprint and sustainable energy in a smart sustainable multi-stage production system.](#)
Biswajit Sarkar.
- Key Talk 19 (ID: 60)** [Probing Stress and Reliability of Silicon Nanowire Anodes for Next Generation Li-ion Battery using in situ Synchrotron X-ray Submicron Diffraction.](#)
Arief Budiman and Nobumichi Tamura.
- Key Talk 20 (ID: 61)** [Impacts of energy consumption on sustainable economic growth around the world.](#)
Ergin Akalpler.
- Key Talk 21 (ID: 65)** [Artificial Cellulase Catalysts for Cellulosic Biofuels.](#)
Ananda Amarasekara.
- Key Talk 22 (ID: 67)** [Modelling sectoral policy alternatives for energy-carbon reduction actions.](#)
Dewei Yang.
- Key Talk 23 (ID: 68)** [Sustainable Energy Development Goals On Target: Integrated Algal Biorefinery and Palm Oil Milling as the Magic Bullet.](#)
Mohd Abdullah.
- Key Talk 24 (ID: 70)** [Biohydrogen Production From Green algae: A Possibility from Lab Scale to Large Scale.](#)
Cherdsak Maneeruttanarungroj.
- Key Talk 25 (ID: 71)** [Cleaner Production of Environment-friendly Brass Faucet by Design of Material and Product.](#)
Chao Yang, Yanfei Ding and Weikui Wang.

- Key Talk 26 (ID: 74)** [Challenges & opportunities of electrochemical conversion process: case study of CO₂ to ethylene.](#)
Kevin Van Geem.
- Key Talk 27 (ID: 75)** [The exergetic efficiency: an exergy based performance criteria under review.](#)
Ana Maria Blanco-Marigorta.
- Key Talk 28 (ID: 77)** [Study on the soot formation of bio-oil combustion.](#)
Shouyin Yang.
- Key Talk 29 (ID: 82)** [FEM-based Heat Transfer Simulations on an Urban Scale.](#)
Benoit Beckers.
- Key Talk 30 (ID: 84)** [Performance and Design of Pd-based Membrane Systems for Hydrogen Separation and Purification.](#)
Wei-Hsin Chen.
- Key Talk 31 (ID: 91)** [Global trade imbalance in terms of energy use, water use, land use and carbon emissions.](#)
Guoqian Chen and Xudong Wu.
- Key Talk 32 (ID: 92)** [Energy Conservation of Buildings by Innovative Window-film.](#)
Takashi Inoue.
- Key Talk 33 (ID: 93)** [Hydrogen production with spark plug reformer.](#)
Dao-Yi Huang and Jer-Huan Jang.
- Key Talk 34 (ID: 94)** [Strategies & Challenges in Implementation of Next- Gen Solar Thermal Plants in India Coupled with 24x7 Thermal Storage.](#)
Vinod Krishna Sethi.
- Key Talk 35 (ID: 96)** [System analysis of the dynamic behavior of micro combined heat and power units combined with thermal and electric energy storage.](#)
Christoph Ummenhofer, John Olsen and Tim Roediger.
- Key Talk 36 (ID: 99)** [A perspective on new nanoparticle enhanced heat transfer fluids and their applications in solar energy systems.](#)
Alina Adriana Minea.
- Key Talk 37 (ID: 100)** [CO₂ emissions mitigation by cryogenic separation processes.](#)
Carolina Font Palma.
- Key Talk 38 (ID: 107)** [Problem Identification for Higher Fraction of Biodiesel in Engine System.](#)
Md Abul Kalam, Haeng Muk Cho and Hj Hassan Masjuki.
- Key Talk 39 (ID: 109)** [Hydrodeoxygenation and hydrocracking of microalgae biodiesel to produce jet biofuel over H₃PW12O₄₀-Ni/hierarchical mesoporous zeolite Y catalyst.](#)
Jun Cheng.
- Key Talk 40 (ID: 110)** [Enhancement of thermoelectric performance in the vicinity of topological phase transition in topological crystal insulator and Dirac semimetal.](#)
Jong-Soo Rhyee.

- Key Talk 41 (ID: 114)** [In-situ gasification of biomass for hydrogen rich fuel gas mixture.](#)
Siva Mohan Reddy Narapureddy, Austosh Kumar, Sonil Nanda, Janusz A. Kozinski.
- Key Talk 42 (ID: 116)** [Flexible Thermoelectric Generators using Bulk BiTe Legs and Stretchable Liquid Metal Interconnects for Harvesting Heat From the Human Body.](#)
Mehmet Cevdet Ozturk, Michael Dickey, Yasaman Sargolzaeiaval, Taylor Neumann and Viswanathan Padmanabhan Ramesh.
- Key Talk 43 (ID: 118)** [Prediction of thermal performance for a heat pipe-based cylindrical battery pack thermal management system.](#)
Yunhua Gan.
- Key Talk 44 (ID: 121)** [Energy Internet: RD&Ds in China.](#)
Yingru Zhao.
- Key Talk 45 (ID: 122)** [Study of Interaction Bacteria and Microalgae in Consortium of Microalgae and Bacteria Isolated from Glagah Beach, Yogyakarta as A Potential Source of Biomass and Lipid for Biodiesel Production.](#)
Thoriq Teja Samudra and Eko Agus Suyono.
- Key Talk 46 (ID: 124)** [Molecular Insights into Ionic-Liquid-Based Supercapacitors.](#)
Guang Feng.
- Key Talk 47 (ID: 127)** [Integerated Waste Heat Reuse from Data Centers.](#)
Xiaoshu Lu.
- Key Talk 48 (ID: 130)** [Three dimensional modelling of electrochemical capacitors \(Supercapacitors\).](#)
Farshad Barzegar.
- Key Talk 49 (ID: 131)** [Some Theoreticals and Primary Characteristics of Microencapsulated Phase Change Materials for Thermal Energy Storage Applications.](#)
Cemil Alkan.
- Key Talk 50 (ID: 133)** [Transport Property Prediction of High Water Content Bioethanol by Molecular Dynamics Simulation.](#)
Xi Jiang.
- Key Talk 51 (ID: 134)** [Integrating BIM, Lean Construction and Sustainability Concepts targeting the Construction Industry.](#)
Elisa Sotelino.
- Key Talk 52 (ID: 136)** [Deep Neural Networks for Prediction of Air Quality in Urban Environments.](#)
Sheen Mclean S. Cabaneros.
- Key Talk 53 (ID: 137)** [First Principles Studies for Efficient Energy Conversion and Storage.](#)
Jyh-Chiang Jiang.
- Key Talk 54 (ID: 138)** [Sustainable Architecture of the Future.](#)
Zbigniew Paszkowski.
- Key Talk 55 (ID: 139)** [Energy monitoring and optimization of a renewable decentralized energy system.](#)
Thomas schluck.

- Key Talk 56 (ID: 142)** [Study on Thermal-Hydraulic Performance and Fabrication of Printed Circuit Heat Exchanger for Liquefied Natural Gas liquefaction System.](#)
Ting Ma.
- Key Talk 57 (ID: 143)** [Building a Smart City Blockchain Platform for Sustainable Energy Prosumer-Chains.](#)
Lee Won Park.
- Key Talk 58 (ID: 151)** [Challenges and Opportunities Facing the Canadian Bioproduct Value Chain.](#)
Jiali Shang.
- Key Talk 59 (ID: 155)** [Hydrodynamic Performance of a Dual-Chamber Oscillating Water Column Wave Energy Converter.](#)
Dezhi Ning.
- Key Talk 60 (ID: 156)** [A Computational Fluid Dynamics \(CFD\) approach for channel regenerative heat exchanger in aquaponics system.](#)
Le Anh Tuan, Yang Wang, Daolaing LI.
- Key Talk 61 (ID: 159)** [From microalgal biomass to biofuels production: Integrated experimental and model-based optimisation.](#)
Constantinos Theodoropoulos.
- Key Talk 62 (ID: 160)** [Energy Management as a Key to the Future Grids.](#)
Daniel Tenfen.
- Key Talk 63 (ID: 161)** [Combination of chemical and cellulase enzymatic pretreatment for the enhancement of bioethanol production from lignocellulosic maize straws wastes.](#)
Natthanicha Sukasem.
- Key Talk 64 (ID: 162)** [Experimental Evaluation of Heat Transfer Rates in Heat Exchangers of Thermoacoustic Devices.](#)
Antonio Piccolo.
- Key Talk 65 (ID: 166)** [What does an optimal future energy system require? A perspective on modelling and policy requirement during energy transitions.](#)
Solomon Asfaw.
- Key Talk 66 (ID: 169)** [Power Windows: Innovative Energy Technologies for Buildings.](#)
Blaine Brownell.
- Key Talk 67 (ID: 170)** [Investigation of Hydrogen Production using Chemical Looping Reforming.](#)
Tariq Shamim.
- Key Talk 68 (ID: 180)** [Quantitative analyses and a novel optimization strategy on negative energy region in parabolic trough solar receivers.](#)
Gang Pei.
- Key Talk 69 (ID: 182)** [A novel thermally driven air-conditioning system- Integrated Adsorption-Absorption system.](#)
Rasoul Nikbakhti and Xiaolin Wang.

- Key Talk 70 (ID: 183)** [Energy Saving versus Indoor Air Quality.](#)
Dorota Krawczyk.
- Key Talk 71 (ID: 186)** [Multi-Criteria Decision Analysis in Residential PV Adoption.](#)
Antonio Sanfilippo.
- Key Talk 72 (ID: 188)** [Application of State-of-the-Art Calculations in Design of Accident Tolerant Fuel for Safe Nuclear Energy.](#)
Barbara Szpunar.
- Key Talk 73 (ID: 193)** [Building a Circular Economy for Automotive Battery Systems.](#)
James Marco.
- Key Talk 74 (ID: 194)** [Novel ZnO nanocones and multi-dimensional nanocarbons: preparation and applications in energy and optical devices.](#)
Churl Seung Lee and Joonho Bae.
- Key Talk 75 (ID: 196)** [Development of ANN algorithms for forecasting Fresnel thermal power production.](#)
Angeliki Mavrigiannaki, Nikos Kampelis, Dionysia Kolokotsa, Filippo Paredes, Luca Venezia, Fabio Montagnino.
- Key Talk 76 (ID: 197)** [City-wide Agent-based Modeling of Transportation System Energy Consumption.](#)
Hesham Rakha.
- Key Talk 77 (ID: 198)** [Key Materials for Organic Photovoltaic Cells.](#)
Jian Zhang, Cong Xu and Zheling Zhang.
- Key Talk 78 (ID: 199)** [Glucose bioenergy harnessing.](#)
Gymama Slaughter.
- Key Talk 79 (ID: 205)** [Resource-Efficient Melting of Bulk Magnesium Alloy AZ91 using Microwave Energy at 2.45 GHz.](#)
Apurbba Kumar Sharma, Radha Raman Mishra and Jitendra Yadav.
- Key Talk 80 (ID: 206)** [Renewable Energy Optimization Using Levy Differential Evolutionary Particle Swarm Optimization \(Levy-DEEPSO\).](#)
Kartik Pandya.
- Key Talk 81 (ID: 207)** [Design a Solar Tracker for Offset Solar Concentrator.](#)
Jose Ruelas and Miguel Blanche.
- Key Talk 82 (ID: 208)** [Green transformations in Vietnam's and Costa Rica's energy sector.](#)
Frauke Urban and Giuseppina Siciliano.
- Key Talk 83 (ID: 209)** [Energy harvesting systems: Technologies, applications, designs, and simulation models | The reality and the challenges.](#)
A.Z. Hafez.
- Key Talk 84 (ID: 210)** [Photocatalytic Fuel Cell: Prospects and Challenges.](#)
Michael K.H. Leung.

- Key Talk 85 (ID: 211)** [Integrated Bio-Cycle System on Tropical Natural Resources for Renewable Energy Sovereignty.](#)
Cahyono Agus.
- Key Talk 86 (ID: 212)** [Role of Heavy Oil in Meeting Future Energy Demand: Technical, Environmental and Economic Challenges and Solutions.](#)
Tayfun Babadagli.
- Key Talk 87 (ID: 214)** [Integration of a Thermochemical Energy Storage System in a Rankine Cycle Driven by Concentrating Solar Power.](#)
Lingai Luo, Ugo Pelay, Yilin Fan, Driss Sitou and Cathy Castelain.
- Key Talk 88 (ID: 215)** [Dielectric properties of solvents, ionic liquids and solvent-ionic liquid microalgae mixtures in microwave assisted direct transesterification.](#)
Ani Idris, Suzana Wahidin and Nor Hisham Kamis.
- Key Talk 89 (ID: 228)** [Nanostructured ceramic-metallic \(cermet\) composites and 3D architecture components for sustainable energy applications.](#)
Gobinda Saha.
- Key Talk 90 (ID: 233)** [Sustainable life cycle integrated approach for energy efficiency evaluation in buildings.](#)
Maria Andrea Triana M..
- Key Talk 91 (ID: 236)** [Computational Fluid Dynamics approach for wind energy applications.](#)
Riccardo Mereu.
- Key Talk 92 (ID: 243)** [On the Construction of the Multistep Methods to Solving for Initial-Value Problem for ODE and the Volterra Integro-Differential Equations.](#)
Vagif Ibrahimov, Galina Mehdiyeva and Mehriban Imanova.
- Key Talk 93 (ID: 244)** [Distributed Power Generation System Based on Carbonized Biomass Gasification.](#)
Kunio Yoshikawa.
- Key Talk 94 (ID: 247)** [New materials for Rechargeable Li-O₂ batteries.](#)
Jiazhao Wang.
- Key Talk 95 (ID: 249)** [Advanced Photocatalytic Systems for Bio-inspired Solar Chemistry and Artificial Photosynthetic Fuel Production.](#)
Günther Knör.
- Key Talk 96 (ID: 252)** ["Red Alert For Environment, Human-Health and Sustainability From Green Photovoltaic Electricity".](#)
Ranjana Jha.
- Key Talk 97 (ID: 264)** [Novel approaches to multiscale modelling in bio-based materials: the case of lime hemp concrete.](#)
Anh Dung Tran Le.
- Key Talk 98 (ID: 296)** [Nanotechnology for thermal engineering: Challenges and perspectives of state-of-the-art solutions.](#)

*Matteo Fasano, Annalisa Cardellini, Matteo Morciano, Matteo Alberghini,
Pietro Asinari and Eliodoro Chiavazzo.*

- Key Talk 99 (ID: 325)** [Comparison of energy indicators to develop energy benchmarks in hotels. Study case in warm clima.](#)
Javier Manceras and Jordi Castellano.
- Key Talk 100 (ID: 330)** [Renewable Energy for Power Supply in Remote Areas.](#)
Tao Ma.
- Key Talk 101 (ID: 351)** [Thermo-economic modelling and optimization of a zeotropic organic Rankine cycle with composition adjustment during operation.](#)
Xianglong Luo, Chaonan Chen, Jianyong Chen, Zhi Yang and Ying Chen.
- Key Talk 102 (ID: 378)** [Theoretical analysis of the power of a spark ignition internal combustion engine with different fuel blends.](#)
Angel Horacio Hernandez Soria, Ricardo Fabricio Escobar Jiménez, Jarniel García Morales, José Francisco Gómez Aguilar, Tomas Emmanuel Higareda Pliego and Víctor Hugo Olivares Peregrino.
- Key Talk 103 (ID: 381)** [Development of H₂S and biogas humidity nanofilter reducer.](#)
Maria Del Pilar Hidalgo, Mateus Sousa Pinheiro and Gabrielle Dias Coelho.
- Key Talk 104 (ID: 406)** [Experiments of a Solar operated HDH Desalination System with Modified Air Heating Layout.](#)
Khalid Al-Mutairi, Mohamed Antar and Atia Khalifa.
- Key Talk 105 (ID: 407)** [Comprehensive thermodynamic analysis of open cycle gas turbines with pressure gain combustion.](#)
Panagiotis Stathopoulos.
- Key Talk 106 (ID: 408)** [Numerical study of magnetic-bio-nano-polymer solar cell coating manufacturing flow.](#)
Anwar Beg, Sireetorn Kuharat, Madhu Aneja, Sapna Sharma and Meisam Babie.
- Key Talk 107 (ID: 410)** [Simulating Entropy Generation In Solar Magnetohydrodynamic Heat Ducts With Eringen's Micropolar Model And Bejan Thermodynamic Optimization.](#)
Ali Kadir, Srinivas Jangili, Tasveer Beg and Anwar Beg.
- Key Talk 108 (ID: 417)** [Computational Quantum Mechanics Based Multiscale Simulation of a Thermoelectric Air Conditioning System.](#)
Che-Wun Hong.
- Key Talk 109 (ID: 442)** [On the Comparison of the Gauss method and the Hybrid Methods and their Application to Calculation of Definite Integrals.](#)
Mehdiyeva Galina, Vagif Ibrahimov and Mehriban Imanova.
- Key Talk 110 (ID: 445)** [Accounting of heat input through low-e glazing with assessing the energy-saving effect for the heating period.](#)
Vladimir Gagarin, Elena Korkina and Matvey Tyulenev.
- Key Talk 111 (ID: 449)** [Comparison of Concentrators For An Off The Shelf High Flux Solar Simulator.](#)
Lina Varon, Luma Fonseca and Jose Simoes-Moreira.

- Key Talk 112 (ID: 479)** [Budget Hotel Composite Index Model of Energy Consumption and Turnover.](#)
Zhen-Ru Teng, Zhi-Zheng Xu* and Chang-Jun Zhou.*
- Key Talk 113 (ID: 505)** [Thermal performance investigation on latent heat thermal storage for waste heat recovery from a high temperature gas flow in energy-intensive industries.](#)
Patricia Royo, Luis Acevedo, Victor J. Ferreira, Tatiana García-Armingol, Ana M. López-Sabirón and Germán A. Ferreira.
- Key Talk 114 (ID: 511)** [Maisotsenko cycle- a source of renewable energy.](#)
Demis Pandelidi.
- Key Talk 115 (ID: 518)** [The Energy Efficiency of PCM integrated Buildings Located in Tropical Savanna Climate.](#)
Shazim Ali Memon and Madina Bimaganbetova.
- Key Talk 116 (ID: 526)** [Artificial intelligence for nuclear energy: Chimera or solution?.](#)
Siddharth Suman.
- Key Talk 117 (ID: 546)** [Estimation and Projection of the Effect of Alternative-Energy Vehicle Technologies and Policy Measures on the Air Quality in St. Petersburg over 2010-2030.](#)
Olga Lozhkina, Vladimir Lozhkin and Igor Malygin.
- Key Talk 118 (ID: 570)** [Analysis of a hybrid system for electricity generation and storage integrated with an electrolyzer, biomass gasification generator and methanation reactor.](#)
Anna Skorek-Osikowska.
- Key Talk 119 (ID: 644)** [Partial wake effect on the dynamic responses of a multiple-turbine floating wind turbine system of a semi-submersible type.](#)
Yingyi Liu, Shigeo Yoshida, Changhong Hu, Makoto Sueyoshi, Hongzhong Zhu, Toyofuku Akinori and Hiroshi Yamamoto.
- Key Talk 120 (ID: 647)** [Pressure energy in water distribution networks in cities.](#)
Alexis Lozano-Medina, Ana Maria Blanco-Marigorta and Abraham Yeray Martín Sánchez.
- Key Talk 121 (ID: 656)** [Daylighting Simulation Analysis for Historical Hotel Rooms.](#)
Denis Miček, Skarleta Floreková, Jitka Mohelníková and Jiří Hirš.
- Key Talk 122 (ID: 698)** [Renewables for industry and transport, based on large- and small-scale green hydrogen production.](#)
Joris Proost.
- Key Talk 123 (ID: 705)** [The Fallacy of Energy Efficiency for Seawater Desalination Processes for Sustainable Development.](#)
Kim Choon Ng and Muhammad Wakil Shahzad Shahzad.
- Key Talk 124 (ID: 729)** [First-principles theoretical design of carbon materials for detecting environmentally polluting and toxic gases.](#)
Yoshitaka Fujimoto.
- Key Talk 125 (ID: K204)** [Experiences in modeling of energy devices.](#)
Jaroslav Krzywanski.

- Key Talk 126 (ID: K209)** [CognitiveBIM: A BIM-Based Approach for a Users' Centered Learnsapes Network.](#)
lavinia chiara Tagliabue.
- Key Talk 127 (ID: K213)** [Development of future sustainable energy systems and strategies towardd 2050.](#)
Andreas Poullikkas.
- Key Talk 128 (ID: K214)** [Application of innovative microfluidic and paper based Al-air batteries for portable devices.](#)
Dennis Y.C. Leung.
- Key Talk 129 (ID: K215)** [Membrane Efficiency for Power Generation from a Salinity Gradient: Thermodynamic Overview.](#)
Adnan Alhathal Alanezi and Ali Altaee.
- Key Talk 130 (ID: K217)** [Sustainability of renewable energy.](#)
Jan Mertens.
- Key Talk 131 (ID: K223)** [Experimental optimization of concentrating solar system for adsorption cooling in summer and heating in winter.](#)
Zhong-Xian YUAN.
- Key Talk 132 (ID: K224)** [Under pressure: Exploring the Effects of Strain across Nanoparticle Surfaces.](#)
Ian Shuttleworth.
- Key Talk 133 (ID: K226)** [Point-focus Concentrating Solar Power Generation: Challenges and Prospects.](#)
Shiva Gorjian.
- Key Talk 134 (ID: K231)** [Bio-oil from Digested Sewage Sludge Pyrolysis Blended with Diesel as Alternative Fuel for Thermoelectric Power Stations.](#)
Glaucia Eliza Gama Vieira and Fernanda Silva Rêgo.
- Key Talk 135 (ID: K235)** [Recent Advances and Challenges of Alternative Energy Sources.](#)
Jalaal A. Hayes.
- Key Talk 136 (ID: K239)** [All Rubbish or Not? - Sustainable Liquid Biofuels for Internal Combustion Engines.](#)
Hossain Abul Kalam.
- Key Talk 137 (ID: K246)** [Development of Cost-effective Bio-cathode Microbial Fuel Cell for nutrients removal and electrical power generation.](#)
Abdullah-Al-Mamun.
- Key Talk 138 (ID: K255)** [Heat recovery from exhaust air in buildings in summer with small temperature difference.](#)
Emanuele Habib.
- Key Talk 139 (ID: K256)** [Phase Selective Reduction of TiO₂ for Energy Conversion Systems.](#)
Hyoyoung Lee.
- Key Talk 140 (ID: K259)** [Parametric Design of a Shading Device and Its Robotic Fabrication.](#)
Basak KUNDAKCI KOYUNBABA.

- Key Talk 141 (ID: K260)** [Nitrogen-Doped 3D Hierarchically Porous Carbon Derived from Renewable Biomass for Energy Storage Application.](#)
Sushil Kumar Saraswat, Muslum Demir, and Ram B. Gupta.
- Key Talk 142 (ID: K265)** [Carbon–Carbon Dioxide \(Boudouard\) Reaction Driven by Thermal Plasma: High CO₂ Conversion and Energy Efficiency.](#)
Yin Yongxiang.
- Key Talk 143 (ID: K268)** [Research on zero emission buildings - Lessons learned.](#)
Matthias Haase.
- Key Talk 144 (ID: K273)** [Reduced Graphene Oxide/Metal Oxide hybrid nano structures for supercapacitative and Surface Enhanced Raman Spectroscopy applications.](#)
C. Kavitha, K. Bramhaiah and Neena S John.
- Key Talk 145 (ID: K274)** [Space heating energy consumption model at urban scale with a statistical approach.](#)
Guglielmina Mutani, Alison Barreto, Roberto Fontana.
- Key Talk 146 (ID: K297)** [Green Quantum dots for Engineering Applications.](#)
Nandini Sharma.
- Key Talk 148 (ID: K281)** [Behind and beyond the meter: How innovative services will utility business model.](#)
Fereidoon Sioshansi.
- Key Talk 149 (ID: P015)** [Outdoor thermal comfort evaluation towards developing Smart Urban Isles in the Mediterranean region.](#)
Despina Serghides, Stella Dimitriou, Ioanna Kyprianou and Costas Papanicolas.
- Key Talk 150 (ID: 185)** [Design And Performance Analysis of ORC Radial Turbine For Low Temperature Heat Source Energy Conversion Application.](#)
Dr Kg Nithesh.
- Key Talk 151 (ID: 009)** [Developing a regional residential building modeling method and exploring the potential for regional energy use saving: a case study of New York State.](#)
Pengyuan Shen.
- Key Talk 152 (ID: 13)** [Green Energy from Oscillating Body in Ocean Current.](#)
Md Mahbub Alam.
- Key Talk 153 (ID: 23)** [New route for biomass to hydrogen: H₂ rich syngas from biomass via microwave-enhanced pyrolysis coupled with catalytic reforming.](#)
Tao Wu and Kaiqi Shi.
- Key Talk 154 (ID: 25)** [Wind turbine power curve upgrades.](#)
Davide Astolfi.
- Key Talk 155 (ID: 36)** [Shifting the peak: Managing peak demand by using technology for citizen engagement.](#)
Jessie Parrish.

- Key Talk 156 (ID: 55)** [Electrospun Nanofibers: Advanced Material for Advanced Energy Applications.](#)
Khalil Abdelmawgoud.
- Key Talk 157 (ID: 69)** [Biofuels for circular economies in developing countries.](#)
Adeel Ghayur.
- Key Talk 158 (ID: 72)** [Applied Energy with Cleaner Environment and Smarter Schemes towards Industry 4.0.](#)
Mohammad Omar Abdullah.
- Key Talk 159 (ID: 80)** [Innovative organizational and technological modeling processes of the green roof installation.](#)
Elena Korol, Valentin Gorbachevskii, Evgeniy Klauss, Natalia Shushunova, Alexey Andrianov and Aleksandr Gulkanov.
- Key Talk 160 (ID: 85)** [Performance evaluation of a residential desiccant evaporative cooling system in Australian climate zones.](#)
Ramadas Narayanan and Edward Halawa.
- Key Talk 161 (ID: 119)** [Integrated Energy Systems: Reliability Evaluation and Deep Neural Network Algorithm.](#)
Juan Yu.
- Key Talk 162 (ID: 129)** [Efficiency Enhancement of Perovskite Solar Cell by using Pre-heat Treatment in Two-Step Deposition Method.](#)
Kritsada Hongsith, Sutthipoj Sutthana, Pipat Ruankham Ruankham, Athipong Ngamjarurojana and Supab Choopun.
- Key Talk 163 (ID: 155)** [CO₂ injection in liquid state as an efficient storage concept for reducing greenhouse gas emissions.](#)
Victor Vilarrasa.
- Key Talk 164 (ID: 163)** [Nature-inspired solutions for future renewable energies by 4D printing.](#)
Farhang Momeni.
- Key Talk 165 (ID: 177)** [Performance of Wedge-Shaped Luminescent Solar Concentrators Employing Phosphor Films.](#)
Michael Hughes, Duncan Smith, Diana-Andra Borca-Tasciuc and Deborah Kaminski.
- Key Talk 167 (ID: 187)** [Enhanced energy efficiency in voltage-actuated magnetic nanoporous alloy films and patterned structures.](#)
Jordi Sort, Alberto Quintana, Cristina Navarro-Senent, Jordina Fornell, Enric Menendez, Maria Dolors Baro, Eva Pellicer and Josep Nogues.
- Key Talk 168 (ID: 204)** [Conduction Current Driven by Mechanical Power through Chemical Potential Difference.](#)
Qing Zhang.
- Key Talk 169 (ID: 333)** [Mathematical Optimisation Approach for Synthesis of Integrated Biogas and Wastewater Treatment System for Palm Oil Mill Effluent.](#)
Steve Z. Y. Foong, Mei Fong Chong and Denny K. S. Ng.

- Key Talk 170 (ID: 393)** [Simple strategies to enhance stability and solar conversion efficiency of metal chalcogenide film electrodes.](#)
Hikmat Hilal and Ahed Zyoud.
- Key Talk 171 (ID: 397)** [Solar-Powered Perpetual Flight across the World.](#)
Parvathy Rajendran.
- Key Talk 172 (ID: 465)** [Foreign Direct Investment and Trade Liberalization as a New Drivers for Sustainable Development? Evidence from developing countries of ASEAN-4.](#)
Abdul Rahim Ridzuan.
- Key Talk 173 (ID: 512)** [Dynamic Wireless Charging of Electric Vehicles on the Fly.](#)
Leandros Maglaras.
- Key Talk 174 (ID: 569)** [Urban Circular Economy as a Regenerative System for a Sustainable Future.](#)
Ghada Rehan and Reeman Rehan.
- Key Talk 175 (ID: 574)** [Towards Zero Emissions at SeaPorts. Different cases studie at Mediterranean Sea.](#)
Juan Moreno-Gutiérrez, Yolanda Amado-Sanchez, Rubén Rodríguez-Moreno, Emilio Pájaro-Velázquez, Fátima Calderay-Cayetano and Vanesa Durán-Grados.
- Key Talk 176 (ID: 688)** [Advanced Data Analytics: A Practical Method to Increase Rail Energy Efficiency in Mining Industry.](#)
Ali Soofastaei.
- Key Talk 177 (ID: 711)** [Blockchain Smart Contracts: A new approach for trading local energy markets.](#)
Ioannis Karamitsos and Charalampos Manifavas.
- Key Talk 178 (ID: 719)** [Thermal characteristics of heat exchangers of heat supply systems in variable operating modes.](#)
Tatyana Rafalskaya and Valery Rudyak.
- Key Talk 179 (ID: K212)** [Chemical Looping Processes for Conversion of Coal and Methane to Produce Heat, Hydrogen and Syngas.](#)
Siriwardane Ranjani.
- Key Talk 180 (ID: K219)** [Nexus between Energy Consumption and Economic Growth: Evidence from SAARC and ASEAN.](#)
Girish G P.
- Key Talk 181 (ID: K222)** [A new method of preparing an organic compound to reduce the loses of the vaporized hydrocarbons from gasoline and petroleum.](#)
Marwan Mohammed.
- Key Talk 182 (ID: K227)** [Study of the thermal conductivity of clay-based building materials.](#)
Nabila Ihaddadene
- Key Talk 183 (ID: K257)** [Landscaping to Save Air-Conditioning Energy and Costs.](#)
Alamah Misni.

Key Talk 184 (ID: K266) [Conversion of used cooking oil \(UCO\) to biodiesel by transesterification over heterogeneous catalsts.](#)

Norzita Ngadi.

Key Talk 185 (ID: K276) [The salt rock as strategic geomaterial for Brazil. A History of success.](#)

Alvaro Maia da Costa.

Key Talk 186 (ID: 805) [Microwave installation for accelerating the process of salting the raw meat during tumbling.](#)

Poruchikov Dmitrii, Vasiliev Alexey, Ruzhyev Viacheslav, Normov Dmitry, Ershova Irina, Samarin Gennady and Zhukov Alexander.

- Article 001 (ID: 032)** [Industrial Ceramic Wastes in Pakistan: Renewable Natural Capital for Energy, Pollution Control and Green Environment.](#)
Sohail Mohammad and Mohammad Saleem.
- Article 002 (ID: 033)** [Sustainable Development with Small and Medium Enterprises: Evidence from the Netherlands.](#)
Ergin Akalpler.
- Article 003 (ID: 038)** [A novel magnetic biosorbent based bronsted acid catalyst functionalized by Remazol brilliant blue R dye for biodiesel production.](#)
Suchith Chellappan, Vaishakh N, Sajith V and Aparna K.
- Article 004 (ID: 041)** [Household energy expenditure: segmentation procedure with a focus on energy poverty.](#)
Giorgio Besagni.
- Article 005 (ID: 20)** [Location optimization of renewable energy farms for electricity generation using different multi criteria decision making \(MCDM\) methodologies.](#)
Ali Mostafaeipour.
- Article 006 (ID: 062)** [Carbon Emissions, Energy use, Real Gdp Per Capita And Trade Matrix In the Indian Economy-An Ardl Approach.](#)
Ergin Akalpler and Simbarashe Hove.
- Article 007 (ID: 22)** [Modeling Partially Premixed Turbulent Ch4 Flames Using A Reaction Progress Variable.](#)
Jim Kok and Marc Woolderink.
- Article 008 (ID: 145)** [Lipid analysis of landfill leachate grown microalgae for biodiesel.](#)
Zareen Khanzada.
- Article 009 (ID: 200)** ["Measuring the Relative Impact of PV Power Loss/Gain on Residential PV Adoption".](#)
Nassma Mohandes, Ali Elrayyah, Antonio Sanfilippo and Amani Boumaiza.
- Article 010 (ID: 201)** [Carbon–Carbon Dioxide \(Boudouard\) Reaction driven by thermal plasma: high CO2 conversion and energy efficiency.](#)
Yongxiang Yin.
- Article 011 (ID: 202)** [Mapping the Circular Economy Performance Indicators:a Global Examination.](#)
Igor Alvarez Etxeberria, Eduardo Ortas and Ainhoa Garayar.
- Article 012 (ID: 213)** [More than Just a Green Façade: Compact Vertical Gardens as Air Cooling Units.](#)
Mariana Liebman-Pelaez, Michael Joseph Maks Davis and Francisco Ramiez.
- Article 013 (ID: 217)** [CognitiveBIM: A BIM-Based Approach for a Users' Centered Learnsapes Network.](#)
Lavinia Chiara Tagliabue and Angelo Luigi Camillo Ciribini.
- Article 014 (ID: 220)** [Method for analysis of Vanadium-Redox-Flow Batteries for centralized storage applications in low-voltage grids.](#)
Christina Zugschwert and Georg Heyer.

- Article 015 (ID: 229)** [Optimization of thermal insulation for ecological reasons depending on the degree-days of heating period.](#)
Robert Dylewski.
- Article 016 (ID: 230)** [Experimental assessment of a novel system control logic for an MCHP system incorporating an electric energy storage.](#)
Felix Gackstatter, Georg Heyer and Tim Roediger.
- Article 017 (ID: 231)** [Bayesian Exponential Random Graph Modelling for defining Sustainable Energy Districts.](#)
Jessica Balest, Alberto Caimo, Elena Pisani, Agnieszka Stawinoga and Laura Secco.
- Article 018 (ID: 239)** [Conversion of Lignin Extracted from babool Waste to Aromatics Hydrocarbons using alumina loaded FDU-12.](#)
Dinesh Kumar and Purtika Sewalia.
- Article 019 (ID: 240)** [Effective European Monetary Union in the Light of the Optimum Currency Area: Model Countries: Germany and Poland.](#)
Ergin Akalpler.
- Article 020 (ID: 254)** [Economic and Environmental Assessment of Biogas Upgrading Using Chicken Livestock Waste-Based Biochar: A Study Case in Indonesia.](#)
Ambar Pertiwinigrum, Margaretha Arnita Wuri, Rachmawan Budiarto, Andang Widi Harto and Misri Gozan.
- Article 021 (ID: 256)** [Swimming baths as “shiftable load”?](#)
Gunther Gehlert, Reiner Schütt and Christian Buchmüller.
- Article 022 (ID: 257)** [CFD modelling and analysis of Two-Phase Geothermal Energy Turbine in Project Combi-Gen.](#)
Sham Rane, Li He and Haiteng Ma.
- Article 023 (ID: 259)** [Heat Transfer-Fluid Flow Interaction in Natural Convection around Heated Cylinder and Its Thermal Chimney Effect.](#)
Haiteng Ma, Li He and Sham Rane.
- Article 024 (ID: 261)** [Commissioning of The Materials Detritiation Facility at Culham Science Centre.](#)
Michal Kresina, Christopher Clements, Ian Wilson, Mark Newman, David Coombs, Aurelien Utard, Robert Vale and Christelle Decanis.
- Article 025 (ID: 268)** [Thermal performance investigation of a smart multilayered wall through CFD simulations coupled to S2S radiation model.](#)
Omar Iken and Saif Ed-Din Fertahi.
- Article 026 (ID: 274)** [Potential for savings of GHG emissions of Czechia through increasing energy efficiency of buildings.](#)
Antonin Lupisek.
- Article 027 (ID: 277)** [Green Simulation Technology on Ecological Urban Design.](#)
Li Yang, Xiaodong Liu and Piman Sun.

- Article 028 (ID: 280)** [Distributed Energy Resources in Russia: threat or opportunity?.](#)
Alexey Khokhlov, Yuriy Melnikov and Tatiana Mitrova.
- Article 029 (ID: 282)** [Application of Liquid-separation Condensation in Plate Condenser.](#)
Jianyong Chen, Kangda Zhu, Chen Ying and Xianglong Luo.
- Article 030 (ID: 284)** [Improving stability of cooking oil waste biodiesel by addition of cumaru biodiesel and the using as blend with mineral diesel.](#)
Tathilene Arruda, Francisco Eduardo Rodrigues, Manoel Dantas, Kelvin Araújo, Pedro Oribio Chaves, Lucas Mateus Da Silva and Nágila Maria Silva Ricardo.
- Article 031 (ID: 287)** [On the historical predictability of the diffusion of renewable energy.](#)
Rita Maria del Rio Chanona, Berke Vow Ricketti, Francois Lafond, Rupert Way and Doyne Farmer.
- Article 032 (ID: 289)** [A Model for Solar Energy Utilization in Buildings: Impact Factors of Tilt Angle & Orientation with Shadow Patterns.](#)
Mohamad Araji.
- Article 033 (ID: 290)** [Comparison of Lithium-Ion Battery Power Models for Photovoltaic Application.](#)
Xingyu Yan, Dhaker Abbas, Antoine Labrunie and Gilles Lancel.
- Article 034 (ID: 292)** [Intrinsically Toughest Silk for Energy Applications.](#)
Leng-Duei Koh and Yuan Cheng.
- Article 035 (ID: 293)** [An Integrated Design Approach For Planning The Measurement and Verification of Zero Energy Settlements.](#)
Angeliki Mavrigiannaki, Kostas Gobakis, Denia Kolokotsa and Kostas Kalaitzakis.
- Article 036 (ID: 297)** [Demand Side Management Strategies for Solar-PV Penetration in Powering Rural Healthcare Centre in Africa.](#)
Lanre Olatomiwa and Richard Blanchard.
- Article 037 (ID: 300)** [Process evaluation of an integrated SOFC and CLC with bubbling fluidized bed-plasma gasification of municipal solid waste system for power production with CO₂ capture.](#)
Peng Jiang, Kaiqi Shi, Mengxia Xu and Tao Wu.
- Article 038 (ID: 302)** [Development of Triple Fluid Heat Exchanger for Hybrid Cooling of Data Center at Various Heat Load.](#)
Navin Raja Kuppusamy and Poh Seng Lee.
- Article 039 (ID: 306)** [Performance comparison of designing PV grid-connected residential house in five regions of China.](#)
Yuehong Lu, Xiaoping Zhang, Zhijia Huang, Mengmeng Wei and Jinzhi Wang.
- Article 040 (ID: 310)** [Process Optimization for Conversion of Grease Waste in to Fatty Acids by Penicillium chrysogenum SNP5 through Artificial Neural Network.](#)
Sangeeta Negi, Farhan Anjum, Satyapriy and Anand Raj.
- Article 041 (ID: 313)** [First Assessment of Potential Geological Reservoirs for Compressed Air Energy Storage in Portugal.](#)

- Article 042 (ID: 315)** [Energy Harvesting from pavements using Piezoelectric sensores - an in-service road case study.](#)
Lucas Fraporti Heller, Lélío Brito, Washington Núñez and Luis Carlos P. S. Filho.
- Article 043 (ID: 316)** [Babassu as raw material to obtaining trimethylolpropyl ester with lubricant properties: characterization and evaluation of the impact in physicochemical properties when added to naphthenic mineral lubricant.](#)
Francisco Eduardo Rodrigues, Nágila Maria Silva Ricardo, Tathilene Arruda, Rita De Cássia Bezerra, João Carlos Assunção, David Thomas Arruda, Francisco Murilo Luna and Francisco Leonardo Martins.
- Article 044 (ID: 322)** [Porous, Single Crystalline and Rectangular Structure of TiO₂ and Li₄Ti₅O₁₂ Nanowires for Energy Conversation and Storage.](#)
Shuichang Zhang and Jianming Li.
- Article 045 (ID: 323)** [Hierarchical One Dimensional Titanate Based Nanomaterials for Lithium-ion Battery.](#)
Xu Jin and Jianming Li.
- Article 046 (ID: 326)** [Development of a new bio-based material embedded with phase change materials for buildings.](#)
Anh Dung Tran Le, Pierre Tittlein, Hachmi Toifane, Arielle Melissa Omeme Ada, Laurent Zalewski, Emmanuel Antczak, Omar Douzane and Thierry Langlet.
- Article 047 (ID: 327)** [Feasibility Study of Utilising 1 MW Grid-Connected Solar Photovoltaic System in Boubyan and Failaka Islands in Kuwait.](#)
Abdulla Al-Rashidi.
- Article 048 (ID: 329)** [Decentralised Energy Optimisation For Blocks of Buildings.](#)
Sean Williams, Michael Short and Tracey Crosbie.
- Article 049 (ID: 339)** [Analysis of Thermoacoustic Cooling and Refrigeration for Performance Enhancement.](#)
Abdullah Alshorman.
- Article 050 (ID: 341)** [Modelling of Fluid Flow and Heat Transfer Through Split Flow in Oblique Fin Heat Sink.](#)
Yong Jie Chen and Poh Seng Lee.
- Article 051 (ID: 348)** [Using Modeling and Simulations to Characterize TEG Arrays.](#)
Rondolf Moreno, Dragoslav Grbovic and Anthony Pollman.
- Article 052 (ID: 352)** [Synthesis and Growth of Hetero-structures of \$\alpha\$ -MoO₃ Nanoparticles and its doped variants for Photo-Chromic Properties.](#)
Reetu Sharma, Ranjana Jha and Anjana Sarkar.
- Article 053 (ID: 354)** [An Environmentally Friendly Process for Refinery Gasoline Upgrading.](#)
Nikolaos Kokkinos, Fotini Panagiotou and Sophia Mitkidou.

- Article 054 (ID: 356)** [An approach for micrositing of distributed wind turbines in complex environments using coupled mesoscale & microscale framework.](#)
Qiang Wang, Kun Luo and Jianren Fan.
- Article 055 (ID: 357)** [Effect of oxygenated fuel additive and water emulsion on the performance and emissions of a compression ignition engine using biodiesel-diesel blends.](#)
Dinesha P and Shiva Kumar.
- Article 056 (ID: 358)** [Experimental study on the effect of injection pressure on the combustion characteristics of a biodiesel engine with nanoparticle additive.](#)
Shiva Kumar and Dinesha P.
- Article 057 (ID: 361)** [Comparative Thermodynamic Analysis of Concentrated Solar Power and Desalination \(CSP+D\) Plants Using Series and Parallel Cogeneration.](#)
Shatha Almarri, Rawdha Alhammadi, Omar Sharaf and Eiyad Abu-Nada.
- Article 058 (ID: 362)** [Quantum insights for developing renewable energy materials and technologies.](#)
Emily Jarvis.
- Article 059 (ID: 365)** [Performance of Micro-Encapsulated Phase Change Materials in a Model Gypsum Wall Board.](#)
Matthew Drake Perrella, Yi Zeng and Jay Khodadadi.
- Article 060 (ID: 369)** [Challenges and Possibilities in Evaluation of Measurements by Pervasive Sensors for Smart Sustainable Cities.](#)
Maryam Zirak, Aneta Strzalka, Mohammad Royapoor and Ursula Eicker.
- Article 061 (ID: 370)** [Modelling of a Photovoltaic/Thermal Heat Pump System.](#)
Mustapha Obalanlege, Yasser Mahmoudi, Roy Douglas, Ehsan Ebrahimi-Bajestan, John Davidson and David Bailie.
- Article 062 (ID: 371)** [Forest biomass characterization and caloric content assessment for bioenergy production – comparison of pinus species.](#)
Blanca Carolina Escobedo Bretado, Jorge Alberto Escobedo Bretado, Rene Homero Lara Castro, Juan Abel Najera Luna, Noel Carrillo Avila, Sandra Veronica Reyes Aguilera and Miguel Angel Escobedo Bretado.
- Article 063 (ID: 372)** [Electrochemical and Surface Analysis Studies on Corrosion Inhibition of Aluminium by an Eco-Friendly Inhibitor in Alkaline Medium.](#)
Mary Anbarasi Charles and Surthi Kumaravel.
- Article 064 (ID: 374)** [Fabrication of n-ZnO/p-CuO heterojunction thin film solar cell by spray pyrolysis deposition.](#)
Jacquiline Regina Mary A and Arumugam S.
- Article 065 (ID: 377)** [Natural Gas Reforming using Nano Nickel Ferrite Spinel Catalyst.](#)
Dalia Abd El-Hafiz, Mohamed Ebiad and Ayat Sakr.
- Article 066 (ID: 379)** [Enhancing the Efficiency of Solar Cells with the Plasmonic Effect of Silver Nanoparticles and Basella Alba Dye Extract.](#)
Bagavathi, Clara Dhanemozhi and Joancily Prema.
- Article 067 (ID: 380)** [Reservoir Simulation on Carbon Dioxide Storage in Fang Oilfield, Thailand.](#)
Kreangkrai Maneeintr and Noppawan Ruanman.

- Article 068 (ID: 384)** [Microwave plasma assisted micro-drilling of polymeric material at 2.45 GHz.](#)
Nitin Lautre.
- Article 069 (ID: 386)** [Energy Price Volatility and the UK Economy: Evidence from DSGE Model.](#)
Nasir Aminu.
- Article 070 (ID: 394)** [Mechanical performance evaluation of composite materials for renewable marine energy: Case of wind turbine blade.](#)
Mostapha Tarfaoui and Mourad Nachtane.
- Article 071 (ID: 395)** [Effect of environmental conditions on the durability of adhesively bonded glass/polyester composite joints under dynamic compression loading.](#)
Mourad Nachtane and Mostapha Tarfaoui.
- Article 072 (ID: 399)** [The Impact of Energy Consumption based on Fossil Fuel and Hydroelectricity Generation towards Pollution in Malaysia, Indonesia and Thailand.](#)
Abdul Rahim Ridzuan, Mohamad Idham Md Razak, Aliashim Albani, Mohd Haziq Murshidi and Abdul Rais Abdul Latiff.
- Article 073 (ID: 400)** [Economic Analysis of Policy Instruments for Energy Efficiency.](#)
Etidel Labidi.
- Article 074 (ID: 401)** [A Highly Efficient and Compact Bidirectional DC-AC Converter for Home Electricity Management Systems.](#)
Sebastien Jacques, Sebastien Bissey, Cedric Reymond and Jean-Charles Le Bunetel.
- Article 075 (ID: 405)** [Future household carbon emissions and implications for regional inequality.](#)
Yuan Rong.
- Article 076 (ID: 409)** [Computational Fluid Dynamic Simulation of a Solar Enclosure With Radiative Flux And Different Metallic Nano-Particles.](#)
Sireetorn Kuharat, Anwar Beg, Meisam Babaie and Ali Kadir.
- Article 077 (ID: 413)** [Artificial Neural Network Based Prediction of Energy Consumption for an Industrial Continuous Frying Process.](#)
Xing Liang, Savvas Tassou and Hongwei Wu.
- Article 078 (ID: 418)** [Experimental Investigation of a Single stage Adsorption Chiller at high re-cooling water temperature.](#)
Ahmad Alsarayreh, Ayman Al-Maaitah, Menwer Attarakih and Hans-Jörg Bart.
- Article 079 (ID: 419)** [Macroeconomic indicator for Electrical Consumption Demand model in Malaysia. Not evidence of inverted.](#)
Abdul Rahim Ridzuan, Mohamad Idham Md Razak, Mahirah Kamaludin, Nazatul Faizah Haron and Nor Asmat Ismail.*
- Article 080 (ID: 420)** [Design for the three-pronged Energy Sustainability: a research challenge.](#)
Aldona Kluczek.
- Article 081 (ID: 421)** [Bio-Coconut Charcoal and Social Enterprising.](#)
Abdul Rahman Jaaffar, Amjad Shamin, Nuraishani Baharom, Jauriyah Shamsuddin and Abdul Rahim Jaguli.

- Article 082 (ID: 424)** [Energetic Death: the Unknown Phase of Thanatology.](#)
Adrian Inchauspe, Silvia del Valle Alonso and Victoria Bordon.
- Article 083 (ID: 425)** [Experimental and theoretical investigation of the temperature and concentration distributions of the upper and lower convective zones of a small salinity gradient solar pond covered with a thin liquid layer.](#)
Asaad Sayer, Hazim Al-Hussaini, Alireza Monjezi and Alasdair Campbell.
- Article 084 (ID: 426)** [Rural electrification based on capacitive coupling using a collector line.](#)
Joan Sebastian Chaves Huertas, Maria Cristina Dias Tavares and Patricia Mestas Valero.
- Article 085 (ID: 427)** [Analysis on Renewable Energy System in Remote Areas: Water-energy-food Nexus Perspective.](#)
Pinto Anugrah and Ahmad Agus Setiawan.
- Article 086 (ID: 428)** [Urban city mobility based on CO2 free hydrogen from electrolysis and solar energy.](#)
Ankica Kovač and Matej Paranos.
- Article 087 (ID: 430)** [Comparison of deposition techniques on the performance of monolithic perovskite solar cells.](#)
Arti Mishra, Zubair Ahmad, R A Shakoore and Farid Touati.
- Article 088 (ID: 432)** [Technical & Economical assessment of The interconnection between façade integrated solar thermal system and low temperature district-heating.](#)
Mikel Lumbreras and Roberto Garay.
- Article 089 (ID: 434)** [RELaTED, An Approach to a decentralized Ultra Low Temperature District Heating.](#)
Roberto Garay, Victor Sanchez and Mikel Lumbreras.
- Article 090 (ID: 435)** [Computationally guided performance enhancements for solar energy and electronics.](#)
Thomas Kelly, Emmett Barnes and Emily Jarvis.
- Article 091 (ID: 437)** [An Empirical Analysis on Renewable Energy Consumption: Review on Urbanization and Quality of Governance.](#)
Vikniswari Vija Kumaran, Ng Chai Yet, Renee Tan Chai Ni, Roselind Kang Kai Qi, Mimosia Tan Sin Yie and Michelle Lean Zhia Xing.
- Article 092 (ID: 439)** [A Multiscalar Approach for ‘Smart City’ Planning.](#)
Sesil Koutra, Vincent Becue and Christos Ioakimidis.
- Article 093 (ID: 441)** [Terracotta based Microbial Fuel Cell architecture for direct energy generation from urine.](#)
Iwona Gajda, John Greenman and Ioannis Ieropoulos.
- Article 094 (ID: 444)** [Development of a Digital PID-like Adaptive Controller and its Application in HVAC systems.](#)
Akinkunmi Adegbenro and Michael Short.

- Article 095 (ID: 448)** [Evaluating an Engine Trigeneration System Potential in Temperate Climate Through an Annual Simulation Analysis using the Equivalent Thermal Efficiency Criteria – Hotel Building Case Study.](#)
Denilson Espirito Santo.
- Article 096 (ID: 451)** [System analysis of natural gas combined cycle \(NGCC\) integrated with kinetics-based chemical looping syngas production.](#)
Azharuddin Farooqui, Archishman Bose, Jordi Llorca and Massimo Santarelli.
- Article 097 (ID: 455)** [Comparative Analysis of Mismatch Power Loss Reduction Techniques for Photovoltaic Series Parallel Array Configurations.](#)
Ahmed Al Mansur, Md. Ruhul Amin and Kazi Khairul Islam.
- Article 098 (ID: 456)** [Assessment of Sustainable Energy Security Performance: Application of Entropy Weight and TOPSIS Method.](#)
Nora Yusma Mohamed Yusoff and Hussain Ali Bekhet.
- Article 099 (ID: 457)** [Rethinking State Estimation For Distribution Systems – An Approach Based on Practical Considerations.](#)
Panayiotis Moutis and Omid Alizadeh-Mousavi.
- Article 100 (ID: 459)** [Chemical induced delithiation on \$\text{Li}_x\text{MnPO}_4\$: an investigation about the phase structure.](#)
Melanie Köntje, Giorgia Greco, Giuliana Aquilanti, Luca Olivi, Peter Axmann and Margret Wohlfahrt-Mehrens.
- Article 101 (ID: 462)** [Water Harvesting Cube.](#)
Salim Ferwati.
- Article 102 (ID: 466)** [Technology Diffusion of Smart Metering as an Energy Efficiency Information System.](#)
Wenjing Yang and Patrick T. I. Lam.
- Article 103 (ID: 468)** [Multifunctional Infrastructure Corridors for Operating Electric Vehicles.](#)
Wolfgang Kuhn.
- Article 104 (ID: 469)** [New hydrokinetic turbine: insight on the pitch and depth effects.](#)
Olivier Pacot, Jean Decaix, Jérémy Schmid, Nino Brunner and Cécile Münch-Alligné.
- Article 105 (ID: 471)** [Rethinking bus transit in a developing country of the Middle East: Energy consumption and emissions of alternative fuel bus technologies in the Greater Beirut Area.](#)
Marc Haddad and Charbel Mansour.
- Article 106 (ID: 472)** [Assessing the Influence of Glazing Ratio on the Energy Performance of an Office Room by Computational Decision Support.](#)
Ondrej Krejcar and Ayca Kirimtat.
- Article 107 (ID: 475)** [Potential of isolated green microalgae for improved biodiesel under mixotrophy.](#)
Anwasha Khanra, Shrasti Vasistha, Shashi Kumar and Monika Prakash Rai.
- Article 108 (ID: 478)** [DuoTurbo: A New Counter-Rotating Microturbine for Drinking Water Facilities.](#)

Daniel Biner, Loïc Andolfatto, Vlad Hasmatuchi, Laurent Rapillard, Samuel Chevailler, François Avellan and Cécile Münch-Alligné.

- Article 109 (ID: 481)** [Integrating Distributed Energy Systems to Tourism in Bulgaria.](#)
Denitsa Kuzeva, Archishman Bose and Lathika Attanayake.
- Article 110 (ID: 484)** [Eucalyptus rootstock for solid fuel production.](#)
Humberto De Jesus Eufraide-Junior, Saulo Philipe Sebastião Guerra, Carla Martins Brito, Natália L. F. V. Arruda, Júlio Horta Ramos and José Marcos Freitas.
- Article 111 (ID: 485)** [Modelling of Multi-Chillers District Cooling Plant with the Integration of System Requirements.](#)
Rabah Ismaen, Tarek Elmekkawy and Mohamed Haouari.
- Article 112 (ID: 487)** [Optimal Design of a Solar Assisted Cooling System.](#)
Mohamed Haouari, Tarek Elmekkawy, Marwa Ashour and Dana Alghool.
- Article 113 (ID: 488)** [Hybrid energy system modeling towards renewable energy share dynamics mitigation.](#)
Dana-Alexandra Ciupageanu and Gheorghe Lazaroiu.
- Article 114 (ID: 494)** [First Principles Investigation of the Defect Structure of Metal Oxide Nanopowders for Catalytic and Solar Energy Materials.](#)
Jared Lyons and Emily Jarvis.
- Article 115 (ID: 499)** [The Influence of the Stock Market and Networks on Alliance Formation: An Empirical Study of China's NEV Industry Alliances.](#)
Zeyuan Song and Yingqi Liu.
- Article 116 (ID: 501)** [Perceptions of households about tree planting for wood energy production in Tanzania.](#)
Yusuph John Kulindwa and Erik Ahlgren.
- Article 117 (ID: 503)** [Enhanced Heat Transfer Performance in a Forward-Facing Channel Using Nanofluids.](#)
Kah Hou Teng, Salim Newaz Kazi, Amiri Ahmad, Bee Teng Chew, Andy Shaw and Ahmed Al Shamma'A.
- Article 118 (ID: 514)** [A study of the energy consumption of the CNC milling machine in slot milling of AISI 6061 T6 aluminum.](#)
Carmita Camposeco-Negrete and Juan De Dios Calderón-Nájera.
- Article 119 (ID: 516)** [Secondary Bio-fuels for the Aviation Industries.](#)
Lala Behari Sukla, Bibhudhendu Shukla, Archana Pattanaik and Debabrata Pradhan.
- Article 120 (ID: 520)** [Co-movement of Electrical Power Consumption with Financial Development in GCC Countries: Wavelet Analysis.](#)
Ali Matar.
- Article 121 (ID: 522)** [Enhancement of a perturb and observe algorithm through the implementation of an intelligent fuzzy logic controller for a photovoltaic station.](#)

- Article 122 (ID: 524)** [Selection of thermoelectric generator for power generation from low grade waste heat.](#)
Sohel Rana, Arbab Iqbal, Abhijit Date, Aliakbar Akbarzadeh, Dulitha Manamperi and Ahmadreza Faghieh Khorasam.
- Article 123 (ID: 529)** [Combustion Characteristics of Olive Pits for Energy Recovery in a counter–current Fixed Bed Reactor.](#)
Mohamed Ali Mami, Marzouk Lajili, Hans-Joachim Gehrman, Dieter Stapf and Rainer Boulduan.
- Article 124 (ID: 530)** [Hydrogen Enriched Syngas production via Gasification of Biofuels Pellets/Powders Blended from Olive Mill Solid Wastes and Pine Sawdust under different Carbon dioxide/Nitrogen atmospheres.](#)
Marwa Zribi, Marzouk Lajili and Fransisco Javier Escudero Sanz.
- Article 125 (ID: 532)** [Compressed Air Energy Storage plants in abandoned underground mines: Preliminary analysis and potential.](#)
Javier Menéndez and Jorge Loreda.
- Article 126 (ID: 533)** [Optimization of Coal Gas Production Using Multiple Feedstocks and Utilization of Landfill Gas and Air.](#)
Chun Yat Sit, Yik Shing Chow and Chi Wai Hui.
- Article 127 (ID: 534)** [Heat Integration and Optimization Study of State-of-the-Art Combined Cycle Power Plant \(CCPP\).](#)
Yik Shing Chow, Chun Yat Sit and Chi Wai Hui.
- Article 128 (ID: 535)** [A Study on Few Thermophysical Properties of Ionanofluids.](#)
Elena Ionela Chereches and Alina Adriana Minea.
- Article 129 (ID: 536)** [Life cycle assessment of an eco-neighborhood: influence of a sustainable urban mobility and photovoltaic panels.](#)
Modeste Kameni Nematchoua and Sigrid Reiter.
- Article 130 (ID: 538)** [Contribution analysis of electrochemical and bioelectrochemical methane production in a bioelectrochemical anaerobic digestion reactor.](#)
Jun-Gyu Park and Hang-Bae Jun.
- Article 131 (ID: 539)** [Long-term evaluation of methane production in a bio-electrochemical anaerobic digestion reactor according to the organic loading rate.](#)
Hyejeong Kwon, Yeo-Myeong Yun and Hangbae Jun.
- Article 132 (ID: 540)** [Effects of auxiliary bio-electrochemical reactor on methane production from highly concentrated food waste in an anaerobic digestion reactor.](#)
Hyejeong Kwon and Hangbae Jun.
- Article 133 (ID: 541)** [Combination of phase change materials and solid waste\(fly ash\) for building energy efficiency.](#)
Lei Liu, Min Guo and Mei Zhang.
- Article 134 (ID: 545)** [Solar Home System with Dual Energy Storage.](#)
Bin-Juine Huang.

- Article 135 (ID: 547)** [WO₃ and CuWO₄ Based Composite Nanomaterials for Solar Water Splitting.](#)
Peng Diao.
- Article 136 (ID: 549)** [Application of laser energy for hole drilling in microwave fabricated kenaf/polypropylene composites.](#)
Renu Tewari, Manoj Kumar Singh and Sunny Zafar.
- Article 137 (ID: 551)** [Volumetric properties of mixtures of di-isopropylether with higher alcohols as contribution to the development of new biofuels.](#)
Eduardo Montero Garcia, Adil Srihyer, Mohamed Dakkach, Natalia Muñoz-Rujas, Fatima E. M. Alaoui and Fernando Aguilar.
- Article 138 (ID: 553)** [Experimental optimization of concentrating solar system for adsorption cooling in summer and heating in winter.](#)
Zhong-Xian Yuan and Qiu-Feng Chen.
- Article 139 (ID: 554)** [Effect of PbI₂ solution on air-preparation of TiO₂ nanorod arrays based perovskite solar cells.](#)
Rui Li, Huanyu Zhang, Min Guo and Mei Zhang.
- Article 140 (ID: 555)** [Experimental investigation of in-situ biodiesel production from Castor seeds \(Ricinus Communis\) using combination of microwave and ultrasound irradiation.](#)
Pravin Kodgire, Kartik Thakkar, Surendra Singh Kachhwaha and Seshasai Srinivasan.
- Article 141 (ID: 556)** [An Approach for Energy Management in Fuel Cell Vehicle \(Modeling and Simulation\).](#)
Waseem Saeed, Ghaith Warkozek and Adib Allaham.
- Article 142 (ID: 557)** [Lead-less mesoscopic perovskite solar cells with enhanced photovoltaic performance by strontium chloride and zinc chloride substitutions.](#)
Huanyu Zhang, Rui Li, Min Guo and Mei Zhang.
- Article 143 (ID: 559)** [Impact of waste disposal variation on performance of waste-to-energy based CHP : A case study.](#)
Kuljeet Grewal and Caroline Hachem-Vermette.
- Article 144 (ID: 563)** [Energy Consumption Profiling - A Case Study in Batch Manufacturing Facility.](#)
Mohamed Awad, Konrad Mulrennan, John Donovan, Russell Macpherson and David Tormey.
- Article 145 (ID: 564)** [Analytical prediction of ignition time of solid combustibles exposed to time-decreasing radiative heat flux.](#)
Junhui Gong, Xuan Wang, Adam Jakubowski and Jing Li.
- Article 146 (ID: 571)** [Design of Electrical Power System for Low-cost ecological nanosatellite.](#)
Faiza Arezki, Kamel Djamel Eddine Karrouche and Wang Xue.
- Article 147 (ID: 577)** [Proposal and analysis of a power and refrigeration cogeneration cycle suitable for air-conditioning.](#)
Shaobo Zhang, Yaping Chen and Jiafeng Wu.
- Article 148 (ID: 578)** [Harnessing voltage regulation services behind the meter: challenges to deployment.](#)

Dani Alexander and Joseph Wyndham.

- Article 149 (ID: 587)** [An alternative approach for biodiesel production from refine/crude palm oils based on cleaner route.](#)
Papasanee Muanruksa, Chatmanee Jitharn, Apichaya Jongjaijit and Pakawadee Kaewkannetra.
- Article 150 (ID: 588)** [Biocatalytic hydroesterification of immobilized *Rhizopus oryzae* lipase on alginate gelatin/alginate pectin beads for biodiesel production.](#)
Papasanee Muanruksa, Samart Moonarmart and Pakawadee Kaewkannetra.
- Article 151 (ID: 594)** [Assessment and mapping of heat demand and heat consumption in the residential and tertiary buildings of an urban region.](#)
Antoinette Marie Reine Nishimwe and Sigrid Reiter.
- Article 152 (ID: 598)** [Green Public Procurement for photovoltaic systems.](#)
Klemen Sredenšek, Maršenka Marksel and Sebastijan Seme.
- Article 153 (ID: 599)** [Micro Climatic Analysis of Sustainable Agricultural Greenhouse with Built-In Roof Solar Stills.](#)
Kabir Abdullahi Muhammad, Alaa H. Salah and Hassan El-Banna Fath.
- Article 154 (ID: 600)** [Experimental Study on Multi-effect Tubular Solar Still with Vacuum Operation under Actual Weather Condition.](#)
Guo Xie, Licheng Sun, Yuehong Su, Tiantong Yan and Hongtao Liu.
- Article 155 (ID: 603)** [Optimization of solar heat integration in agro-industrial processes through a computer-aided replication tool.](#)
Yolanda Lara, Luis Acevedo, Patricia Royo, Ana M. López-Sabirón and Germán A. Ferreira.
- Article 156 (ID: 604)** [Infrared techniques in the study of phyllites applied as a potential radiowaste barriers.](#)
Aniela Matuszewska, Monika Fabiańska, Joanna Kyzioł-Komosińska and Natalia Sawicka.
- Article 157 (ID: 605)** [Co-Simulation of an Energy Management System for Future City District Energy Systems.](#)
Andreas Moser, Daniel Muschick, Markus Gölles, Werner Lerch, Hermann Schranzhofer, Peter Nageler, Thomas Mach, Carles Ribas Tugores and Ingo Leusbrock.
- Article 158 (ID: 607)** [Photosynthetic Biogas Upgrading: Current Status and Perspectives.](#)
Archishman Bose, Karthik Rajendran, Richen Lin and Jerry Murphy.
- Article 159 (ID: 608)** [Exergy Analysis of Air Gap Membrane Distillation Unit for Chemical Mechanical Polishing Wastewater treatment.](#)
Imtisal-E- Noor, Andrew Martin and Massimo Santarelli.
- Article 160 (ID: 610)** [Impacts of Flue Gas Recirculation \(FGR\) on Biomass Burnability for Emission Reduction.](#)
Imran Ali Shah, Xiang Gou and Jinxiang Wu.
- Article 161 (ID: 611)** [Site Selection and Performance Analysis of PV Plants in the Coast of Ecuador.](#)

- Article 162 (ID: 612)** [Enchancing benefits and green energy knowledge through GRASPINNO Living Lab approach.](#)
Maršenka Marksel, Klemen Sredenšek, Stane Božičnik, Miralem Hadžiselimović and Sebastijan Seme.
- Article 163 (ID: 613)** [Benefits of demand side response in regional and interconnected Integrated Single Electricity Market \(I-SEM\).](#)
Shurui Wang, Inna Vorushyro, Ye Huang, Patrick Keatley, Yujie Xu, Haisheng Chen and Neil Hewitt.
- Article 164 (ID: 614)** [Beyond Petroleum: A Study Of The Potential Impacts From The Introduction Of Electric Cars In Ecuador.](#)
Michael Maks Davis.
- Article 165 (ID: 618)** [Developing Theoreticals and Primary Characteristics of Microencapsulated Phase Change Materials for Thermal Energy Storage.](#)
Cemil Alkan and Derya Kahraman Döğüşcü.
- Article 166 (ID: 619)** [PCM-metal foam composite as an effective means of latent heat thermal energy storage \(LHTES\).](#)
Ahmed Alhusseney, Nabeel Al-Zurfi, Adel Nasser, Mohammed Al-Azawy and Ali Al-Fatlawi.
- Article 167 (ID: 622)** [Gas Fired Boiler with the ORC Module and Thermal Energy Storage as a Perspective Cogeneration System For Domestic Applications.](#)
Dariusz Mikielewicz and Jan Wajs.
- Article 168 (ID: 624)** [Thermal Trouble: Callenges in Optimization and Evaluation of Thermal Energy Systems.](#)
Klaus Lichtenegger and Viktor Unterberger.
- Article 169 (ID: 625)** [Simplified method for performance evaluation of the industrial energy efficiency solution using frequency convertors.](#)
Coroiu Mihaela.
- Article 170 (ID: 630)** [Concept and Sustainable Solutions for Daylight Applications for Buildings in Tropical Climate.](#)
Sopa Visitsak , Nattaree Sridaranon and Joseph Khedari
- Article 171 (ID: 634)** [Battery-less wireless low consumption sensor powered by PV cells and buffered by an ultra-capacitor.](#)
Miguel A. Rapado, Belen Moreno and Juan A. Hernández.
- Article 172 (ID: 635)** [Demand Side Management: Economic Perspective for Peak Shaving.](#)
Ishak Burhani Nasution.
- Article 173 (ID: 636)** [Study of thermal conductivity and energy performance of insulation materials based on textile waste.](#)
Salma Ouhaibi, Naoual Belouaggadia, Mohammed Ezzine and Rachid Lbibb.
- Article 174 (ID: 637)** [Thermal performance of a passive solar wall incorporating phase change material\(PCM\) and aerogel insulation to reduce heat stress risks.](#)

Oumaima Imghoure, Naoual Belouaggadia, Mohammed Ezzine and Zohir Younsi.

- Article 175 (ID: 638)** [Beyond Petroleum: A look at the interaction between public space and the introduction of an efficient electric transport in Quito, Ecuador.](#)
Jaire Cagigal and Michael Maks Davis.
- Article 176 (ID: 641)** [Performance Optimization of Compression Ignition Engine Fuelled With Rice Bran Oil Biodiesel.](#)
Jagannath Hirkude, Sunay Dharwadker and Risha Hegde.
- Article 177 (ID: 643)** [Heat Transfer Enhancement Using an Innovative Film Cooling Design.](#)
Nabeel Alzurfi, Ahmed Alhusseny and Adel Nasser.
- Article 178 (ID: 646)** [Exergy-based Methods Applied to Energy Process Engineerin.](#)
Tatiana Morosuk and George Tsatsaronis.
- Article 179 (ID: 648)** [Non-linear regression model to estimate the environmental impact of a newspaper.](#)
Alexis Lozano-Medina, Ana María Blanco-Marigorta and Pedro Cabrera.
- Article 180 (ID: 649)** [Optimal HVAC Dispatch for Demand Response: A Dynamic Programming Approach.](#)
Michael Short.
- Article 181 (ID: 651)** [Liquefaction of Waste Tire Rubber Chips Used for the Absorptive Recycling of Spilled Oils.](#)
Sikhumbuzo Charles Kunene, Chao-Lung Chiang, Kuen-Song Lin, Hong-Paul Wang and Chao-Yen Wang.
- Article 182 (ID: 652)** [Hydrogen Generation by Gasification of Pig Hair Biowastes over NiO/Al₂O₃ Catalyst in an Integrated Fuel Cell Processor.](#)
Kuen-Song Lin, Yen-Ting Kuo, Chao-Lung Chiang, Ndumiso Vukile Mdllovu and Hou-Peng Wan.
- Article 183 (ID: 653)** [Design and thermal performances of a hybrid solar-electric dryer.](#)
Ahmed Zoukit, Hicham El Ferouali, Issam Salhi, Toufiq El Kilali, Doubabi Said and Naji Abdenouri.
- Article 184 (ID: 655)** [Enhancement of Biodiesel Production Via Sequential Esterification and Transesterification Over Solid Superacidic and Superbasic Catalysts.](#)
Sikhumbuzo Charles Kunene, Chao-Lung Chiang, Kuen-Song Lin, Chia-Wei Shu, Jeffrey Chi-Sheng Wu, Kevin Chia-Wen Wu and Yu-Tzu Huang.
- Article 185 (ID: 658)** [Providing real-time situational awareness from IoT data in Smart Grids.](#)
Ivana Dalcekovic, Aleksandar Erdeljan and Nikola Dalcekovic.
- Article 186 (ID: 661)** [Multi-Functional Solar-Powered Car-Like Robot.](#)
Moustafa Kurdi and Imad Elzein.
- Article 187 (ID: 662)** [An Energy Management Framework for Processing of Waste in India and Role of Microwave Energy.](#)
Himadri Phukan Sharma and Radha Raman Mishra.

- Article 188 (ID: 663)** [Microencapsulated phase change material with TiO₂-doped/graphen oxide shell for visible light photocatalysis and thermal energy storage.](#)
Zohir Younsi, Ghada Ben Hamad and Imene Boudehane.
- Article 189 (ID: 665)** [Applying the Ultraviolet Technique for Estimating Remotely the Leakage Current Values of Overhead Transmission Lines Insulators.](#)
Mostafa Abdelshafy and Walid Salem.
- Article 190 (ID: 673)** [On the Dynamical and Operational Performance Analysis of Lead-Acid Battery Interfaced to Electrical Grid.](#)
Mohammad Widyan.
- Article 191 (ID: 683)** [Performance Analysis of PV Cells under Monsoon Climate.](#)
Himangshu Bhowmik and Ruhul Amin.
- Article 192 (ID: 684)** [Smile.](#)
Funda Cansu Ertem-Kappler and Mark de la Vieter.
- Article 193 (ID: 692)** [Study on Stability, Fuel Properties, Engine Combustion and Emission Characteristics of Bio-mix Fuel.](#)
Vikas Sharma, Ganesh D and Anto Alosius M.
- Article 194 (ID: 697)** [Consolidation of Brownian and Inertia expressions of particle deposition in multiphase flow.](#)
Esam Jassim and Bashar Jasem.
- Article 195 (ID: 721)** [Modeling and validating the surface heat gain for tropical industrial environments.](#)
Po-Yen Lai and Wee Shing Koh.
- Article 196 (ID: 722)** [Energy saving potential of glazing retrofit for the tropical climate.](#)
Huizhe Liu and Wee Shing Koh.
- Article 197 (ID: 723)** [A novel power system integrated supercritical water gasification of coal with CO₂ capture.](#)
Zilong Zhu, Yaping Chen and Jiafeng Wu.
- Article 198 (ID: 731)** [Investigation of the heterogeneity coefficient of the loose mixture at the final stage of mixing in a gravitational apparatus.](#)
Anna Kapranova, Ivan Verloka, Daria Bahaeva, Mikhail Tarshis, Sergey Cherpitsky and Vyacheslav Sidorov.
- Article 199 (ID: 735)** [Renewable Energy Resources Geothermal Energy Potential of Resadiye County of Tokat Province.](#)
AŞİna KÜbra Aslan, Şefik TaŞ, A. Burcu GÜltekin, Zekerİya ÇelİK and Ayhan KandemİR.
- Article 200 (ID: 737)** [Energy Transformation During a Shock Wave Distortion Under a Thermally Stratified Plasma Region.](#)
Olga Azarova, Konstantin Krasnobaev and Tatiana Lapushkina.
- Article 201 (ID: 739)** [Energy Storage coordination and optimisation in an Electric Power Grid.](#)
Eheda Hassan, Mouloud Denai and Georgios Pissanidis.
- Article 202 (ID: 742)** [The benchmark for the smart grid application.](#)

- Article 203 (ID: 753)** [Enhanced Electro-Oxidation of Methanol at Pt-Au Nanocatalyst for Direct Methanol Fuel Cells.](#)
Islam Ahmed Al-Akraa, Yaser Asal and Ahmad Mohammad.
- Article 204 (ID: 754)** [Arc discharge synthesis of carbon-tin nanocomposite for usage as anode material for Li-ion batteries.](#)
Alexey Zaikovskii, Dmitry Kozlachkov, Sergey Novopashin and Ekaterina Fedorovskaya.
- Article 205 (ID: 759)** [ZnO/Cu core-shell nanoparticles for CO₂ conversion to methanol.](#)
Natália Podrojková, Andrej Oriňak and Renáta Oriňaková.
- Article 206 (ID: 760)** [Carbon microfibers as a support for catalyst for thermal decomposition of methane to produce hydrogen.](#)
Katarina Sisáková, Andrej Oriňak and Renáta Oriňaková.
- Article 207 (ID: 761)** [Phenomenology of hadrons in a chiral symmetric model.](#)
Walaa Eshraim.
- Article 208 (ID: 771)** [Effect of Air channel Geometry on the Performance of a Composite Metal Foam-PCM to Air Heat Exchanger.](#)
Pouyan Talebizadehsardari, Donald Giddings, Mark Gillot, David Grant and Gavin Walker.
- Article 209 (ID: 779)** [Electric Power Consumption Based on Exploratory Neural Network Data Analysis.](#)
Bohumír Garlík.
- Article 210 (ID: 787)** [The wide and varied utilization of Geothermal Energy in Iceland.](#)
Örn Daníel Jónsson.
- Article 211 (ID: 788)** [Combined Absorption Heat Pump and Heat Storage Effects of LiBr Crystal Slurry.](#)
Yoshinori Itaya and Nobusuke Kobayashi.
- Article 212 (ID: 789)** [Optimising Well Structures and Trajectories for Maximising Oil Recovery.](#)
Noorfadzreena Mahmud.
- Article 213 (ID: 791)** [Tubular and lattice steel wind turbine towers for onshore wind energy.](#)
Nafsik Stavridou, Efthymios Koltsakis and Charalampos Baniotopoulos.
- Article 214 (ID: 795)** [Study of CSF “Subcriticality” Challenging During SLB in a VVER 440.](#)
Petya Vryashkova and Pavlin Groudev.
- Article 215 (ID: P006)** [Reduction coal power plant flue gas emission and low cost production single cell protein \(Spirulina\) for biofuel.](#)
Md Abu Affan and Adnan Jaman Turki.
- Article 216 (ID: P007)** [Performance Investigation Of Thermal Insulation Materials For Walls A Case Study In Nicosia \(Turkish Republic Of North Cyprus\).](#)
Lida Ebrahimi Vafaei, Mcdominic Chimaobi Eze.
- Article 217 (ID: P008)** ["Synthesis of unique Nickel Sulphide \(Ni₃S₂ - NiS\) Nano \$\beta\$ morphology for counter electrode in Quantum Dot Dye Sensitized Solar Cell".](#)

Rekha Bhardwaj, Medha Bhushan, Ranjana Jha.

- Article 218 (ID: P009)** [Requirements for positive energy districts in Energy Master Planning.](#)
Matthias Haase.
- Article 219 (ID: P017)** [On the Construction of the Multistep Methods to Solving for Initial-Value Problem for ODE and the Volterra Integro-Differential Equations.](#)
Vagif Ibrahimov, Galina Mehdiyeva and Mehriban Imanova.
- Article 220 (ID: P033)** ["Investigation On Fuel Injection Sprays Of Water-In-Diesel Emulsion and Using Shadow Imaging".](#)
Mhadi Abaker Ismael.
- Article 221 (ID: P34)** [Partial wake effect on the dynamic responses of a multiple-turbine floating wind turbine system of a semi-submersible type.](#)
Yingyi Liu, Shigeo Yoshida, Changhong Hu, Makoto Sueyoshi, Hongzhong Zhu.
- Article 222 (ID: P40)** [New Method for Quality Control of Fire Protective Coatings.](#)
D. Korolchenko, T. Eremina and D. Minailov.
- Article 223 (ID: P042)** [A Novel stand-alone solar-powered agriculture greenhouse-desalination system; increasing sustainability and efficiency of greenhouses.](#)
Hassan E.S. Fath, Akbar A. Javadi, Mohammad Akrami, Raziye Farmani, Abdelazim Negm and Tapas Mallick.
- Article 224 (ID: P053)** ["Experimental Study on The Influence Mechanism of The Climate Conditions on The Household PV System".](#)
Yassir Idris Abdalla Osman and Jinping Li.
- Article 225 (ID: P021)** [Processing seaweeds using solar and wind energy.](#)
Kamaruddin Abdullah.
- Article 226 (ID: 090)** [Photoelectrochemical reduction of CO₂ to liquid fuels on octahedral catalyst of carbonized Cu\(benzene 1,3,5-tricarboxylic acid \[BTC\]\) doped with Pd nanoparticles.](#)
Xiaoxu Xuan and Jun Cheng.
- Article 227 (ID: 172)** [Cement Sheath Integrity Evaluation for CO₂ Storage in Salt Rock Caverns and Design Specification of Salt Rock Cavern for CCS Application.](#)
Okhiria Udebhulu, Alvaro Costa, Pedro V. M. Costa and Ricardo Azevedo.
- Article 228 (ID: 216)** [The Effects of Street Greening on Thermal Environment in Severe Cold Region of China in Winter.](#)
Yujie Lin and Hong Jin.
- Article 229 (ID: 218)** [Utilization of energy consumption in a two-echelon supply chain model under carbon emission and setup cost reduction.](#)
Mitali Sarkar, Waqas Iqbal, Biswajit Sarkar and Han Lim.
- Article 230 (ID: 221)** [Multi-dimensional solvothermal growth and characterization of ZnS nanoparticles for photoanodes in solar cells.](#)
Medha Bhushan, Ranjana Jha and Rekha Bhardwaj.

- Article 231 (ID: 224)** [A novel Fluid-Structure Interaction \(FSI\) modelling of solar panel installations in buildings for typhoon resilience.](#)
Conrad Allan Jay Pantua, John Kaiser Calautit, Yupeng Wu and Othman Alnajdi.
- Article 232 (ID: 225)** [Analysis of the feasibility of decentralized solar desalination technologies as replacement for medium and large plants: Saudi Arabia as a Case study.](#)
Othman Alnajdi, Conrad Allan Jay Pantua, John Kaiser Calautit and Yupeng Wu.
- Article 233 (ID: 226)** [Performance investigation highlighting the energy storage behavior of Cupric Oxide Nanoparticles Synthesised Through Electrochemical Discharge Process.](#)
Purushottam Singh, Swaroop Mandal, Naresh Choudhary, Santosh Mishra, Harish Bishwakarma and Alok Das.
- Article 234 (ID: 288)** [Improving Oil and Gas Operations by Integration of Solid Oxide Fuel Cells in a Sustainable Manner.](#)
Khalid Al-Khori, Yusuf Bicer and Muammer Koc.
- Article 235 (ID: 298)** [Possibilities and Difficulties in Implementation of Energy Saving Investments with Involvement of Consumers.](#)
András Horkai and Zsófia Balló.
- Article 236 (ID: 303)** [Energy Conservation of Buildings with Innovative Window Film.](#)
Takashi Inoue and Kozo Takase.
- Article 237 (ID: 308)** [The use of surface energy of nanoparticles to produce high-strength armor concrete.](#)
Anastasia Sychova, Larisa Svatovskaya and Maxim Sychov.
- Article 238 (ID: 324)** [One-Pot Synthesis of Active {100} Facets Anatase TiO₂-Graphene Nanorods with Improved Photocatalytic Activities.](#)
Jianming Li and Xiaoqi Wang.
- Article 239 (ID: 338)** [Thermogravimetric Analysis of Coal and Sawdust Blends for Efficient Syngas Production.](#)
Munmi Bhattacharyya, Pinakeswar Mahanta and Kaustubha Mohanty.
- Article 240 (ID: 383)** [A sustainable precast frame of a low-rise building using geopolymer concrete.](#)
Haider Hamad Ghayeb, Hashim Abdul Razak and Nor Hafizah Ramli Sulong.
- Article 241 (ID: 402)** [Tokenizing Data for Mini-grids and Solar Home Systems: Challenges and Applications.](#)
Veronica Garcia.
- Article 242 (ID: 404)** [Environmental sustainability and urban electric mobility: Considerations on emission of atmospheric pollutants.](#)
Ailton Conde Jussani.
- Article 243 (ID: 415)** [Nearly Zero Energy Hotels in a Mediterranean Area: a New Economic Approach.](#)
Francesco Nocera, Antonio Gagliano, Salvatore Giuffrida and Bruno Messina.
- Article 244 (ID: 470)** [Effect of Sky temperature on the performance of solar collectors and solar cookers.](#)

- Article 245 (ID: 490)** [Membrane-refrigerator method of compressed air dehydration.](#)
Alex Tishin, Margaret Karaseva, Sergei Tikhonov and Nikolay Laguntsov.
- Article 246 (ID: 500)** [Optimal demand response load dispatch under dynamic outages in an integrated electricity market.](#)
Chukwuka Monyei, Absalom Ezugwu and Serestina Viriri.
- Article 247 (ID: 515)** [Energy Fallout: Air Pollution Effects on Environmental and Social Externalities.](#)
Faraz Farhidi.
- Article 248 (ID: 523)** [Using of solar energy at the University of Beni-Suef performance improving and resources increasing.](#)
Mohamed Moheyeldin Mahmoud.
- Article 249 (ID: 645)** [An improved method of estimation for risk loss cost in natural gas network layout optimization.](#)
Jinyu An and Jianbo An.
- Article 250 (ID: 672)** [Strategies & Challenges in Implementation of Next- Gen Solar Thermal Plants in India Coupled with 24x7 Thermal Storage.](#)
V.K. Sethi and Partha S. Dutta.
- Article 251 (ID: 675)** [Reactivity assessment and oxidation kinetic model for CO₂ splitting on Fe-based oxygen carrier.](#)
Azharuddin Farooqui, Jordi Llorca and Massimo Santarelli.
- Article 252 (ID: 676)** [Biological carbon dioxide upcycling and its application in biogas upgrading.](#)
Tae Hoon Kim and Yeo-Myeong Yun.
- Article 253 (ID: 680)** [Hydrothermally Synthesized Flower-Like Rutile TiO₂ Nanostructures for Solar Cell.](#)
Mohd Hasmizam Razali.
- Article 254 (ID: 695)** [Recent Advances of Nanolubricant Additives for Fuel Economy in Automotive.](#)
Mohammed Kamal Ahmed Ali, Hou Xianjun and Mohamed A. A. Abdelkareem.
- Article 255 (ID: 727)** [Measurement, comparison and improvement of properties of ultra-light thermal protection materials.](#)
Eugene Shamparov.
- Article 256 (ID: 728)** [Formation of a general approach to stochastic modeling of the initial stage of hydrodynamic cavitation in a control valve.](#)
Anna Kapranova, Adango Miadonye, Anton Lebedev and Alexandr Melzer.
- Article 257 (ID: 738)** [Film metal-hydride hydrogen accumulators: potentials, production methods, prospects for application.](#)
Dmitri Karpov.
- Article 258 (ID: 748)** [3D printed energy storage microdevices.](#)
Valentina Bertana, Giorgio Scordo, Stefano Romano, Pietro Zaccagnini, Alberto Scalia, Luciano Scaltrito, Sergio Ferrero, Matteo Cocuzza, Andrea Lamberti, Felice Catania and Simone Luigi Marasso.

- Article 259 (ID: 770)** [Fabrication of Solution-Processable, highly transparent and conductive electrodes of graphene by the method of spin coating.](#)
Asha Pai, Karthik Shankar, Abhinand N, Harikrishnan R, Jithin Suresh and Vyshakh Dileep K.
- Article 260 (ID: 772)** [Electrical vehicles fleet as wheeling battery to optimize the renewable energy sources penetration and power stability in isolated electrical systems.](#)
Juan Luis Padrón-Morales, David Borge-Diez, Enrique Rosales-Asensio, Miguel de Simón-Martín, Alberto González-Martínez and Antonio Colmenar-Santos .
- Article 261 (ID: 780)** [Cost Optimal UK Deployment of the Passive House Standard.](#)
Shane Colclough and Martin McWilliams.
- Article 262 (ID: 797)** [Laws of Heat Radiation from Gas Volumes and Calculations of Radiation from Torch in Furnaces.](#)
Anatoly Makarov, Victoria Okuneva and Yuliya Pavlova.
- Article 263 (ID: P005)** ["Bio-oil from Digested Sewage Sludge Pyrolysis Blended with Diesel as Alternative Fuel for Thermoelectric Power Stations".](#)
Gláucia Eliza Gama Vieira and Fernanda Silva Rêgo.
- Article 264 (ID: P016)** [A simplified model of a reactor for production of hydrogen from photocatalytic water splitting \(PWS\) using TiO₂ and natural sunlight.](#)
K R Davey.
- Article 265 (ID: P018)** [Synthesis and Photophysical Properties of Hetero Trinuclear Complexes of Tris \$\beta\$ -diketonate Europium with Organoplatinum Chromophore.](#)
Muhammad S. Khan, Rashid Ilmi, Ashanul Haque, Idris Juma Al-Busaidi and Nawal K. Al Rasbi.
- Article 266 (ID: P019)** [Experimental studies of the initial section in the channel simulator of a heat-releasing element cell.](#)
E.F. Avdeev, P. Hong Tran and V.O. Smirnova.
- Article 267 (ID: P020)** ["A New Method for Preparing an Organic Compound to Reduce the Loses of the Vaporized Hydrocarbons from Gasoline and Petroleum".](#)
Marwan Mohammed Farhan and Atyaf Abdulqahar Younus.
- Article 268 (ID: P027)** [Mobile Commerce using ECC and MQTT Protocol.](#)
S.Ramana, N Bhaskar, M.V.Ramana Murthy and S. Chinaramu.
- Article 269 (ID: P032)** [Transport Property Prediction of High Water Content Bioethanol by Molecular Dynamics Simulation.](#)
Cheng CHEN and Xi JIANG.
- Article 270 (ID: 360)** [Thermodynamic and heat transfer analysis of a Liquid Piston Gas Compressor \(LPGC\).](#)
Mansoureh Khaljani, Yasser Mahmoudi, Adrian Murphy, John Harrison and David Surplus.

- Article 271 (ID: 366)** [Computational Investigation of the Melting Characteristics of Phase Change Materials within the Annulus of a Vertical Finned Shell-and-Tube Thermal Storage Unit.](#)
Wenwen Ye and Jay Khodadadi.
- Article 272 (ID: 715)** [Simulation of the Block Diagrams of the Information Energy Converters.](#)
A.B. Bushuev and V.A. Kudriavtseva.
- Article 273 (ID: 572)** [Determinants of sustainable energy consumption in public buildings.](#)
Daiva Dumciuvieni, Akvile Cibinskiene, Mark Melenhorst and Jasminko Novak.
- Article 274 (ID: 809)** [6D Energy Efficient Metro Rail Station Design Using BIM: A Review Of Literature.](#)
Hirakraj Bapat and Debasis Sarkar.
- Article 275 (ID: 804)** [Optimization of Microbial Growth Inhibition using Pineapple Leaves Juice.](#)
Norazwina Zainol and Amirah Ya'Acob.
- Article 276 (ID: 807)** [Predictive Modelling of Thermal- Pore Pressure Gradient Using Shearing Wave and Mohr Circle Curve.](#)
Àbdull Halim bin Abdul and Azman Mustafa.
- Article 277 (ID: 801)** [Flow shear stress applied on replacing the role of buffer in microbial fuel cells.](#)
Chin-Tsan Wang, Wen-Ton Chong and Hwai-Chyuan Ong.
- Article 278 (ID: 813)** [Application of Photovoltaic Solar Energy for rehabilitation of saline water wells in Hermosillo, Sonora, Mexico.](#)
Ricardo A Rodríguez-Carvajal, Germán E Dévora-Isiordia, Paula C Isiordia-Lachica and Martín Picón-Núñez.
- Article 279 (ID: 440)** [The Zero Energy Ambition in Districts' Planning. The Case study of Leuze in Belgium.](#)
Sesil Koutra, Vincent Becue and Christos Ioakimidis.
- Article 280 (ID: 815)** [Interdisciplinary design of solar thermal collectors tailored for small-sized applications.](#)
Cristina Nicolau and Mihai Comsit.
- Article 281 (ID: 531)** [Assessing the Influence of Electrical Load Disturbances on Steel Factory Production Lines.](#)
M. A. Al Aqil, Adel Aldalbahi, Rajamohamed Sumsudeen and M.H Shwehdi.
- Article 282 (ID: 766)** [Eco-friendly Green Concrete: A review.](#)
Mahmoud Al Khazaleh and Baskar Gopalan.
- Article 283 (ID: 694)** [Decentralized Fault Tolerant Fuzzy plus PI Control of MIMO Systems: Quadruple Tank Case Study.](#)
Himanshukumar Patel and Vipul Shah.
- Article 284 (ID: 817)** [Investigation of the temporal behavior of desiccant disk for use in dehumidifiers and air conditioners.](#)
Panos Sphicas.

- Article 285 (ID: 518)** [The Energy Efficiency of PCM integrated Buildings Located in Tropical Savanna Climate.](#)
Shazim Ali Memon and Madina Bimaganbetova.
- Article 286 (ID: 546)** [Estimation and Projection of the Effect of Alternative-Energy Vehicle Technologies and Policy Measures on the Air Quality in St. Petersburg over 2010-2030.](#)
Olga Lozhkina, Vladimir Lozhkin and Igor Malygin.
- Article 287 (ID: 698)** [Renewables for industry and transport, based on large- and small-scale green hydrogen production.](#)
Joris Proost.
- Article 288 (ID: K274)** [Statistical analysis of space heating energy consumption for residential buildings in Turin \(Italy\)](#)
Guglielmina Mutani, Alison Barreto, Roberto Fontana.
- Article 289 (ID: K227)** [Study of the thermal conductivity of clay-based building materials.](#)
Nabila Ihaddadene, Razika Ihaddadene, Pierre-Olivier Logerais, Fabien Delaleux and Olivier Riou
- Article 290 (ID: 718)** [Carbon emission assessments on China's hydropower investments in developing countries.](#)
M.Y. Han.
- Article 291 (ID: 431)** [The perceptions and attitudes of forestry students towards renewable energy sources.](#)
Evangelia Karasmanaki and Georgios Tsantopoulos.
- Article 292 (ID: 382)** [Development of Nano-Sponge of Graphene for absorption of Petroleum in Water.](#)
Maria Del Pilar Hidalgo Falla, Vanessa Alvim Alves, Diego C. Souza and Luiz F. Xavier.
- Article 293 (ID: 796)** [Techno-Economic Study of Vehicle to Grid \(V2G\) Implementation in Java Bali Power System, Indonesia.](#)
Muhammad Huda, Muhammad Aziz and Koji Tokimatsu.
- Article 294 (ID: 798)** [Co-production of hydrogen and power from black liquor via supercritical water gasification, chemical looping and power generation.](#)
Arif Darmawan, Koji Tokimatsu and Muhammad Aziz.
- Article 295 (ID: 436)** [PVDF/PVC BLEND MEMBRANE FOR CO₂/CH₄ SEPARATION.](#)
Sunarti Abd Rahman and Bipradeep Maity.
- Article 296 (ID: 480)** [Integrating users in the buildings' design process to reduce energy gaps.](#)
Patrícia Lourenço, Manuel Pinheiro and Teresa Heitor.
- Article 297 (ID: 734)** [Optimal Multi-microgrid Energy Management in Distribution System with Deep Neural Network.](#)
Yan Du and Fangxing Li.