Centurion University

Shaping Lives...
Empowering Communities...

SDG 12 | Research on Responsible Consumption and Production

SDG 12 REPORT 2021

THE CONTEXT

Centurion University conducts research in the area of "Responsible Consumption and Production" through its various schools and research centres. Faculty and students are engaged in and publish many research articles striving towards the standalone topic and others which are cross disciplinary. the University's production units, industry sponsored action learning laboratories and community engagement provide an excellent basis for research in this area.

In the year 2020, there were 89 research papers published in journals of national and international repute which increased by 7 and 4 in the year 2021 and 2022. The following section serves as a link to last three-year research endeavour in SDG 12.

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Research Articles

1. Spatio-Temporal Limnological Analyses Resulting to Sustainable Development
2. “Effect on Production of Seed through Induced Breeding by using Labeo rohita and Cyprinus carpio in Fish Hatchery”
3. Enhancement and Segmentation of Brain Tumor from MR Image Using Modified Water Cycle Algorithm and Relevance Vector Machine Algorithm
4. Breast Cancer Detection and Classification Using a novel Fast and Robust FCM Segmentation and MWCA based LLRBFNN Machine Learning Model
5. Non-Stationary signal Frequency Identification using Frequency improved Fast S-Transform
6. Feathers of Bulbulcus ibis (L.) as a non-destructive biomonitoring tool for assessment of lead pollution: A case study from various severely contaminated wetland habitats
7. The Effects of Plastic Bags & Bottles Waste Materials Usage as Partial Replacement of Sand on the Strength & Physical Properties of Road Side Pedestrian Walkway Paving
8. Contemporary Drowning Cashew Trade of India
9. Kinetics of esterification of propionic acid and cyclohexanol
10. Chemical E-Car
11. Enhancement of mass transfer using a coaxially placed string of cones in a three-phase fluidized bed electrochemical reactor
12. Wall-to-bed mass transfer in an inverse fluidized bed
13. Gas holdup in a bubble column in the presence of string of cones
14. Physico-mechanical and thermal Performances of Palm Leaf Fiber Reinforced Epoxy Composites Filled with Pulverized Fuel Ash
15. Light weight concrete with partial replacement of coarse aggregates with flyash aggregates
16. Pitcher irrigation in salinity management for production of Brinjal crop in coastal soil of West Bengal, India.
17. Influences of waste egg shell to restore soil fertility and impact on pulse crop in the Eastern ghats, India.
18. Modeling and evaluation of Aqua Crop for maize (zea mays L.) under full and deficit irrigation: A case study in semi-arid tropics
19. SRIM Simulation of Sputtering Effect of a Ferromagnetic Material by NormallyIncident Inert (Rn) Gas Ions
20. Selection Polymer Composite Materials used in Wind Turbine Blade using Finite Element Analysis
21. Evidence for negative differential resistance and switchable diode effect in multiferroic BiFe0.95Sc0.05O3-based resistive random access memory under doping engineering
22. Electrical transport properties of La doped BiFeO3-NaNbO3 composite
23. Evaluation of nootropic activity of Bacopa monnieri and Convolvulus pluricaulis herbs extracts with Panchagavya ghrita
24. Performance and characterisation of mesoporous cerium oxide for toxic As(V) removal: Performance and mechanistic studies
25. Conformity Assessment with Structural Strength Requirements of Mechanical Polycentric Prosthetic Knee used for Amputee Rehabilitation
26. A Novel IIoT Based ERP-PLM System for MSME of Indian Market

27. Design of a Metamaterial Absorber
28. A Hand Written Digit Recognition Based Learning Android Application
29. India's Evolving Structure: Miles to go before 2025
30. Performance Comparison of PCA and LDA with Linear Regression and Random Forest for IRIS Flower Classification
31. Efficacy of Solar Powered Water Pumps for Rural Farmers in Odisha; India
32. Encephalon Disease Detection and Classification Using Discrete Orthonormal S-Transform and Sine Cosine Algorithm Based Deep Convolutional Network
33. Wavelet Transform and WCA Based Deep Convolutional Network for Brain Tumor Detection and Classification from Magnetic Resonance Images
34. Epliptic Seizure Detection and Classification Using Cumulative Sum Average filter TT-Transform and Harmony Search Algorithm Based LLRBFN model
35. Design and Investigation of Hexagonal Shaped Wearable Antenna for Body Centric Wireless Communication
36. Influence of Ca2+ Ion Substitution on Structural, Morphological, Optical, Thermal and Magnetic Behaviour of Mg1-xCaxFe2O4 ($0 \le x \le 0.5$) Spinel
37. Investigation of structural, optical and magnetic behavior of MAl2O4 (M= Zn and Co) nanoparticles via microwave combustion technique
38. Investigation of Structural, Optical and Antibacterial Activity of ZnS Nanoparticles
39. Influence of Sr2+ ion substitution on structural, morphological, optical, thermal, and magnetic behavior of MgFe2O4 cubic spinel
40. Design of a Rectangular Microstrip Patch Antenna Using Resonant Circuit Approach
41. Erratum for “Attribution of Hydrologic Changes in a Tropical River Basin to Rainfall Variability and Land-Use Change: Case Study from India
42. A Series of Mixed Ligand Metal Complexes: Synthesis, Characterization and Molecular Docking Investigations Against Coronavirus Spike Protein
43. Evaluation of medicinal potential and antibacterial activity of selected plants against Streptococcus mutans
44. Preparation of graphene reinforced aluminium composites: investigation of microstructural, electrical conductivity and microhardness behaviour
45. An in sight into mechanical and thermal properties of shape memory polymer reinforced with nanofillers: a critical review
46. Nanocrystalline gadolinium doped ZnO: An excellent photoluminescent material and efficient photocatalyst towards optoelectronic and environment remedial applications
47. Synthesis and photocatalytic activity of Ni doped SnO2 nanoparticles for removal of toxic industrial dyes
48. Agronomic responses and molecular breeding approaches towards elevated ozone in rice
49. The recently emerged BA.4 and BA.5 lineages of Omicron and their global health concerns amid the ongoing wave of COVID-19 pandemic – Correspondence
50. Unexpected sudden rise of human monkeypox cases in multiple non-endemic countries amid COVID-19 pandemic and salient counteracting strategies: Another potential global threat?
51. Computational studies on potential new anti-Covid-19 agents with a multi-target mode of action
52. Estimation of longitudinal aerodynamic parameters using recurrent neural network

53. Control efficiency and mechanism of spinetoram seed-pelleting against the striped flea beetle Phyllotreta striolata
54. A review on selected pharmacological activities of Curcuma longa L.
55. Investigation on Thermokinetic Study and Optimization of Sugarcane Bagasse Thermal Pyrolysis
56. Need of booster vaccine doses to counteract the emergence of SARS-CoV-2 variants in the context of the Omicron variant and increasing COVID-19 cases: an update
57. Dependence of Cu Doping on Morphology, Magnetic Properties and Cytotoxicity Activity of ZnO Nanostructures
58. Natural Alkaloids: An Updated Teratological Review on Livestocks
59. Black Fungus: Pandemic Devastating India?
60. Diagnosis of Human Leptospirosis: Comparison of Microscopic Agglutination Test with Recombinant LigA/B Antigen-Based In-House IgM Dot ELISA Dipstick Test and Latex Agglutination Test Using Bayesian Latent Class Model and MAT as Gold Standard
61. Aqueous and chemical extraction of saponin of Acacia concinna (Willd.)Dc.: An effective Bio-surfactant solution to extract silk fibroin from muga
62. Simulation estimation of levodopa and carbidopa in mice plasma by LC-MS/MS
63. Pregnant Women's Aspects, Consequences, Prevention, and Management During the Covid-19 Omicron Wave
64. Investigations on structure, dielectric and ferroelectric properties of SrBi2Ta2O9 ceramic via A-site defect engineering
65. An efficient epileptic seizure classification system using empirical wavelet transform and multi-fuse reduced deep convolutional neural network with digital implementation
66. 1,2-Difunctionalizations of alkynes entailing concomitant C–C and C–N bond-forming carboamination reactions
67. A modular A4 symmetric scotogenic model for neutrino mass and dark matter
68. Radiative and Convective Heat Transfer on MHD Stagnation point Nanofluid Flow past a Stretchable Surface with Melting
69. Radiation, Chemical Reaction and Dissipative Effects on MHD Stagnation Point Nano-Fluid Flow Past a Stretchable Melting Surface
70. Copper iodide induced ambient-air-stable formamidinium lead triiodide thin film
71. Mixed convective radiative heat transfer in a particle-laden boundary layer fluid over an exponentially stretching permeable surface
72. Rapid synthesis and magnetic property characterization of Mg2+ doped Co3O4 nanostructures
73. Breeding for pest resistance in vegetable crops: A Review
74. Fuelwood species diversity and consumption patternin the homegardens from foothills of Indian EasternHimalayas
75. Blockchain based holistic trust management protocol for ubiquitous and pervasive IoT network
76. Application of Control Strategies and Machine Learning Techniques in Prosthetic Knee: A Systematic Review
77. Finite Element Analysis and Experimental Validation of Polycentric Prosthetic Knee
78. Use of clean energy for sustainable livelihood in rural areas: A case from South Odisha
79. Simulation of solar operated grass cutting machine using PVSYST software
80. Twin combination of Omicron and Delta variants triggering a tsunami wave of ever high surges in COVID-19 cases: A challenging global threat with a special focus on the Indian subcontinent

81. Omicron (B.1.1.529) variant of SARS-CoV-2: Concerns, challenges, and recent updates
82. SARS-CoV-2 and its variants of concern including Omicron: A never ending pandemic
83. Synthesis, Characterization and In Vitro Cytotoxic Effects of Cu: Co3O4 Nanoparticles Via Microwave Combustion Method
84. Facile microwave synthesis, structural, optical, and magnetic properties of Zn2+ doped CoAl2O4 spinel nanoparticles.
85. Urea-thiazole/benzothiazole hybrids with a triazole linker: synthesis, antimicrobial potential, pharmacokinetic profile and in silico mechanistic studies
86. Characterization of Pure Rutile Titania Nanoparticle Prepared by Feasible Method for Coatings and Visible Light-Driven Dye Removal Application
87. Magnetic property applications of microwave method prepared zinc ion modified CoAl2O4 nanoparticles
88. Study of physical and magnetic properties of Mg: Co3O4 spinels using L-Arginine as fuel
89. Reinforce Modified Equilibrium Optimization Technique based MS-PID Frequency Regulator for a Hybrid Power System with Renewable Energy Sources, Soft Computing, Springer,
90. Harmonic Profile Enhancement of Grid Connected Fuel Cell through Cascaded H-Bridge Multi-Level Inverter and Improved Squirrel Search Optimization Technique. Energies
91. WRAPPER-Based Metaheuristic Optimization Algorithms for Android Malware Detection: A Correlative Analysis of Firefly, BAT & WHALE Optimization
92. A single transcript CRISPR/Cas9 mediated mutagenesis of CaERF28 confers anthracnose resistance in chilli pepper (Capsicum annuum L.)
93. Evaluation of Cell Parameter Variation on Energy Absorption Characteristic of Thermoplastic Honeycomb Sandwich Structure
94. Flow And Heat Transfer Analysis of H2o-Al2o3 Nanofluid Over A Stretching Surface With Electrified Nanoparticles And Viscous Dissipation
95. Electrochemical Mass Transfer in Bubble Columns with Conical Entry in the Presence of Displaced Devices
96. A Deep Learning Method to Forecast COVID-19 Outbreak
97. Elementary Framework for an IoT based Diverse Ambient Air Quality Monitoring System
98. GIS based saltwater vulnerability mapping of the northern coast of Odisha, East coast of India
99. Technology Adoption of Farmers Regarding System of Rice Intensification (Sri) Method in Puri District of Odisha, India
100. Long-Run Market Performance of Acquiring Companies Using Bhar Approach: Evidence from India