

Table of Contents

Tunable Hydrophobicity and Photoluminescence in Polystyrene-Calcium Carbonate Composites with Citric Acid-Induced Porosity A.E. Olowofoyeku, A.K. Aremu, A.O. Olorunnisola, A.E. Olowofoyeku, J.R. Villegas Mendez and D.G. Adekanmi	1
Study of Kevlar Aramid Fiber in Improving Concrete Performance and Mitigating Pathologies D.F. dos Santos and A. De Queiroz Mendes	15
Smart Architecture: Case Studies and Breakthrough Applications of Advanced Materials in Buildings V. Frighi	25
Study of Solar and Wind Energy Potential for Power Generation in Pulo Aceh A. Adria, A. Syuhada, T. Tarmizi and I.D. Sara	37
Challenges in Water Energy Development for Energy Security in Aceh R. Thaib, Z. Zulfan, I. Setiawan and A. Rizki	45
Analysis of the Effect of Discharge Needs on Pesangan Hydropower Plant in Central Aceh Regency S.A. Putri, F. Fadhliani, T.M. Hafli, A. Desmi and N. Savira Ersu	53
IoT Based Environmental and Water Monitoring System for Sterilization Units in Honduras C. Matute Molina, F. Calderon Perdomo and F.d.L. Cáceres Lagos	61
Biomimetic Robot with Peristaltic Locomotion Integrating 3D Printing and IoT Technologies J.L. Sandoval-Ferrufino, B.E. Alvarado-Orellana and J.V. Fajardo	71
Implementation of an IOT Sensor Network and Machine Learning to Measure the Water Quality J.F. Alarcón Madrid, O.J. Paz Quintanilla and M. Martinez-Rangel	85
Implementation of Boosting Algorithms in Predicting Air Quality Index of South Indian Cities D. Mishra, A.S. Sahu and S. Naman	99
An Improved Data Integrity Verification Model in Cloud Computing N.L. Khumalo, T.E. Mathonsi and S.O. Ojo	117
PRISMA Approach for Assessing Fingerprint Classification Models Based on Artificial Super-Intelligence Techniques A. Mustafa, R. Millham and H. Yang	127
Personalized Adaptive Learning Management System Based on Bioinspired Algorithm: A Systematic Review F.L. Yvonne Khomo, R. Millham and A. Mustafa	139