

1. Record Nr.	UNINA990007175500403321
Autore	Corbo, Leonardo
Titolo	Sicurezza e protezione dell'ambiente di lavoro : vademecum per gli adempimenti legislativi e amministrativi. U.S.S.L.,A.N.C.C., E.N.P.I., ispettorato lavoro, presidi multinazionali di prevenzione / Leonardo Corbo
Pubbl/distr/stampa	Milano : Pirola, 1982
Descrizione fisica	184 p. ; 24 cm
Disciplina	344.01
Locazione	DDRC
Collocazione	G-13
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr.	UNINA9910523886403321
Autore	Berihun Mulatu Liyew
Titolo	Advances of Science and Technology : 9th EAI International Conference, ICAST 2021, Hybrid Event, Bahir Dar, Ethiopia, August 27–29, 2021, Proceedings, Part I // edited by Mulatu Liyew Berihun
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783030937096 9783030937089
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (652 pages)
Collana	Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, , 1867-822X ; ; 411
Disciplina	600
Soggetti	Application software Artificial intelligence Computer systems Computer networks Computer and Information Systems Applications Artificial Intelligence Computer System Implementation Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Conference Organization -- Contents - Part I -- Contents - Part II -- Chemical, Food and Bioprocess Engineering -- Synthesis, Optimization and Characterization of Pulp from Banana Pseudo Stem for Paper Making via Soda Anthraquinone Pulping Process -- Abstract -- 1 Introduction -- 2 Materials and Methods -- 3 Results and Discussion -- 3.1 Proximate and Chemical Compositions Analysis -- 3.2 Analyses of Pseudo Stem Fiber Morphology -- 3.3 Pulp Yield and Kappa Number -- 3.4 Process Parameters Investigation on Pulp Yield and Kappa Number -- 3.5 FTIR Analysis of Pseudo Stem and Pulp -- 3.6 Sheet Making and Testing -- 4 Conclusions -- References -- Effect of Toasting and Natural Fermentation on the Phytochemical and Functional Properties of Oats Grown in Ethiopia -- Abstract -- 1

Introduction -- 2 Materials and Methods -- 2.1 Sample Collection -- 2.2 Sample Preparation -- 2.3 Determination of Phytochemicals -- 2.4 Determination of Functional Properties -- 2.5 Experimental Design and Statistical Analysis -- 3 Results and Discussion -- 3.1 Effect of Toasting and Fermentation on Phytochemicals -- 3.2 Effect of Toasting and Fermentation on Functional Properties -- 3.3 Correlation Between Phytochemicals and DPPH Antioxidant Activity of Oats -- 4 Conclusions -- Acknowledgments -- References -- Correlation of UV Assisted Fenton Process and Fenton Process for Removal of Reactive Red 2(RR2) Dye Color from Wastewater -- Abstract -- 1 Introduction -- 1.1 Fenton Process -- 1.2 Photo-Fenton and Related Processes -- 2 Methodology -- 2.1 Chemicals and Equipment's -- 2.2 Preparation of Stock Solution -- 2.3 Experimental Design and Description -- 2.4 Preparation of Standard Solution -- 3 Results and Discussions -- 3.1 Effect of H<sub>2</sub>O<sub>2</sub> Concentration -- 3.2 Effect of Ferrous Ion (Fe<sup>2+</sup>) Concentration -- 3.3 Effect of RR2 Initial Concentration. 4 Conclusions and Recommendations -- 4.1 Conclusions -- 4.2 Recommendation -- References -- Isolation and Characterization of Microcrystalline Cellulose from Eragrostis Teff Straw -- Abstract -- 1 Introduction -- 2 Materials and Methods -- 2.1 Proximate and Chemical Composition Analysis of Raw Material -- 2.2 Extraction of Cellulose -- 2.3 Isolation of Microcrystalline Cellulose -- 2.4 Characterization of Cellulose Microcrystalline -- 2.4.1 Yield Determination -- 2.4.2 PH Determination -- 2.4.3 Particle Size Analysis -- 2.4.4 Determination of Water-Soluble Substance -- 2.4.5 Determination of Hydration Capacity -- 2.4.6 Moisture Sorption Capacity -- 2.4.7 Loss on Drying -- 2.4.8 Functional Group Analysis -- 2.4.9 Crystallinity Analysis -- 2.4.10 Thermogravimetry Analysis -- 3 Result and Discussion -- 3.1 Proximate and Chemical Composition Analysis -- 3.2 Characterization of Cellulose Microcrystalline -- 3.2.1 Functional Group Analysis -- 3.2.2 Crystallinity Index Analysis -- 3.2.3 Thermogravimetry Analysis -- 4 Conclusion -- References -- Process Revamping of H<sub>2</sub>SO<sub>4</sub> Plant to Double Contact Double Absorption (DCDA) Using ASPEN HYSYS to Reduce SO<sub>2</sub> Emission: Case of Awash Melkassa Sulfuric Acid Factory -- Abstract -- 1 Introduction -- 2 Methodology -- 2.1 Materials -- 2.2 The Proposed Intermediate Absorption -- 2.3 Reactions Package -- 2.4 Fluid Package -- 2.5 Simulation of Feed Conditions -- 3 Result and Discussion -- 3.1 Column Design Analysis -- 3.2 Effect of Inlet Temperature on SO<sub>3</sub> Absorption -- 3.3 The Effect of Different Types of Recycles Setup -- 3.4 Effect of Split Ratio on the Amount of SO<sub>2</sub> -- 3.5 Trade-off Between Emission Reduction and Utility Consumption -- 4 Conclusion -- References -- Effect of Blend Ratio on Physico-Mechanical Properties of Agro Stone Composite Caulking Materials -- Abstract -- 1 Introduction -- 2 Materials and Method. 2.1 Materials -- 2.2 Fabrication of Mold -- 2.3 Sample Preparation -- 2.4 Setting Times Determination -- 2.4.1 Initial Setting Time Determined by the Penetration Depth -- 2.4.2 Final Setting Time -- 2.5 Water Absorption Test -- 2.6 Specific Gravity -- 2.7 Mechanical Properties -- 2.7.1 Compressive Strength Test -- 2.7.2 Flexural Strength Test -- 2.7.3 Tensile Strength Test -- 2.8 Determination of Free Chlorine -- 3 Results and Discussion -- 3.1 Magnesium Chloride Solution Specific Gravity -- 3.2 Water Absorption -- 3.3 Mechanical Properties -- 3.3.1 Compressive Strength -- 3.3.2 Flexural Strength -- 3.3.3 Tensile Strength Test -- 3.4 Results of Free Chlorine in Caulking Material -- 4 Conclusion -- 5 Recommendation -- Acknowledgment -- References -- Assessment of Nutrients and Heavy Metals in the Groundwater and Surface Water in the Zeber Watershed: The Case of

the Bahir - Dar City Waste Disposal Site -- Abstract -- 1 Introduction -- 1.1 A Subsection Sample -- 2 Methodology -- 2.1 Descriptions of the Study Area -- 2.2 Sample Collection, Preservation and Laboratory Analyses -- 3 Results and Discussions -- 3.1 Spatial and Temporal Variations in the Nutrients and Microbiological Parameters of Surface Water -- 3.2 Spatial and Temporal Variations in the Levels of Heavy Metals in Surface Water -- 3.3 Spatial and Temporal Variation in the Estimations of Nutrients and Microbiological Parameters of Groundwater Quality -- 3.4 Concentrations of Heavy Metals in Groundwater -- 4 A Comparison of the Effect of the Open Dump Site on Surface Water and Groundwater Quality in the Zeber Watershed -- 5 Conclusion -- Acknowledgments -- References

Manufacturing of Tiles from Kieselguhr Sludge /Diatomaceous Earth/ -- Abstract -- 1 Introduction -- 2 Methodology -- 3 Characterizations of the Produced Floor Tiles -- 4 Results and Discussion -- 5 Conclusion. Acknowledgments -- References

Electrical and Electronics Engineering -- Optimal Transmit Antenna Selection for Massive MIMO Systems -- 1 Introduction -- 2 System Description -- 2.1 System Model -- 2.2 Mobile Location Positioning -- 2.3 Close-In(CI) Path Loss Model -- 2.4 Trilateration Based Antenna Selection -- 3 Sum Rate Evaluation -- 3.1 Dirty Paper Coding Sum Capacity(CDPC) -- 3.2 Zero Forcing Sum Capacity(CZF) -- 4 Energy Efficiency Evaluation -- 5 Results and Discussion -- 6 Conclusions -- References

Design and Performance Analysis of Enhanced Directional MAC Protocols for Cognitive Radio Wireless Mesh Networks -- Abstract -- 1 Introduction -- 2 Directional MAC Protocol for CRWMNs -- 3 Design and Performance Analysis of Directional CSMA/CA MAC Protocol for CRN (DCR-MAC) -- 3.1 Transmitter Blocking (E1) -- 3.2 Directional Transmission Collision Between SUs (E2) -- 3.3 Collision of SU's Directional RTS with PU Transmission (Receiver Blocking) - (E3) -- 3.4 Receiver Already in Communication (E4) -- 3.5 Successful Directional Transmission (E5) -- 3.6 Idle Channel Detection (E6) -- 3.7 Only PU's Signal Detection (E7) -- 3.8 Only SU's Signal Detection (E8) -- 3.9 Detection of Both PU and SU Signal (E9) -- 4 Throughput for DCR-MAC Protocol -- 5 Simulation and Discussion -- 6 Conclusion -- References

Performance Analysis of Hybrid Beamforming Techniques in Large MU MIMO Systems -- 1 Introduction -- 2 Related Works -- 3 The System and Channel Model for mmWave Massive MIMO Systems -- 3.1 the mmWave Large MIMO System Model -- 3.2 The mmWave Massive MIMO Channel Model -- 4 Hybrid Precoding Algorithms for MU mmWave Large MIMO Systems -- 5 Simulation Results and Analysis -- 5.1 Simulation Parameters -- 5.2 Analysis of the Achievable Rate of the Proposed Algorithms -- 5.3 Impact of Number of BS Antennas on Spectral Efficiency. 5.4 Spectral Efficiency for Various Number of Users -- 5.5 Spectral Efficiency for Hybrid Beamforming with Digital and Analog Beamforming Approaches -- 6 Conclusion -- References

Narrow-Linewidth Compound Ring Fiber Laser Using HBF as a Feedback for Sensing and Communication Application -- Abstract -- 1 Introduction -- 2 Fiber Laser Configuration and Theoretical Modeling -- 2.1 Resonator Loss Difference -- 2.2 Fiber Laser Characteristics -- 3 Conclusion -- References

Design and Performance Analysis of 125 MW Floating Photovoltaic Power Plant in Ethiopia: Metema vs Lake Tana -- Abstract -- 1 Introduction -- 2 Methodology -- 2.1 Study Area -- 2.2 Study Area -- 2.3 Components of Floating Photovoltaic Power Plant -- 2.3.1 Solar Module and Associated Components -- 2.4 Mathematical Modeling of Temperature and Wind Effect -- 2.5 Panel and Inverter Specification -- 2.6 Design of 125 MWp Floating Solar PV

-- 2.6.1 System Sizing -- 2.6.2 String and Component Arrangement --  
2.7 MATLAB Modeling Solar PV -- 3 Result and Discussion -- 4  
Conclusion -- References -- Efficiency Analysis of a Solar Photovoltaic  
DC and Existing AC Distribution System for Bahirdar University Data  
Center -- Abstract -- 1 Introduction -- 2 Data Center Topologies and  
Components -- 3 Resource Assessment and System Parameter Metrics  
-- 3.1 Data Center Load Profile -- 3.2 Solar Resource Assessment of  
Selected Site -- 3.3 System Parameter Metrics and Estimation Methods  
-- 4 Sizing and Models of Proposed DC-System Components -- 4.1  
Sizing System Components -- 4.2 System Component Models -- 4.3  
Main Components Loss and Efficiency Modeling -- 5 Results and  
Discussions -- 5.1 Efficiency Analysis of Existing Distribution System  
(Base Case Scenario) -- 5.2 Efficiency Analysis of DC Distribution  
System (Proposed Case Scenario) -- 5.3 Energy Cost Analysis -- 6  
Conclusions -- References.  
Design of Genetic Algorithm Based Robust LQG Controller for Active  
Magnetic Bearing System.

---

Sommario/riassunto

This two-volume set of LNICST 411 and 412 constitutes the refereed post-conference proceedings of the 9th International Conference on Advancement of Science and Technology, ICAST 2021, which took place in August 2021. Due to COVID-19 pandemic the conference was held virtually. The 80 revised full papers were carefully reviewed and selected from 202 submissions. The papers present economic and technologic developments in modern societies in 7 tracks: Chemical, Food and Bioprocess Engineering; Electrical and Electronics Engineering; ICT, Software and Hardware Engineering; Civil, Water Resources, and Environmental Engineering ICT; Mechanical and Industrial Engineering; Material Science and Engineering; Energy Science, Engineering and Policy.

---