

2022

Nano and Bio-Based Technologies for Wastewater Treatment Jun 05 2021 Over the past few decades the boom in the industrial sector has contributed to the release in the environment of pollutants that have no regulatory status and which may have significant impact on the health of animals and humans. These pollutants also refer as “emerging pollutants” are mostly aromatic compounds which derive from excretion of pharmaceutical, industrial effluents and municipal discharge. Some form of pollutions have also evolved, including the proliferation of acid mine drainage from oxidation or weathering of obsolete and unmanaged excavations around the world; this results mostly in the dispersion of inorganic pollutants in the environment at level surpassing the treatment capacity of conventional techniques. It is recurrent these days to find water treatment plants which no longer produce water that fits the purpose of domestic consumption based on newly established guidelines. This situation has prompted water authorities and researchers to develop tools for proper prediction and control of the dispersion of pollutants in the environment to ensure that appropriate measures are taken to prevent the occurrence of outbreaks due to sudden load of these pollutants in the water system. The chapters in this book cover a wide range of nano and bio-based techniques that have been designed for the real time detection of emerging contaminants in environmental water sources, geochemical models that are continuously improved for the prediction of inorganic contaminants migration from the mine solid wastes into ground and surface waters. Remediation strategies are also discussed and include effective techniques based on nanotechnology, advanced membrane filtration, oxidative and bio- degradation processes using various types of nanocatalysts, biocatalysts or supporting polymer matrices which are under advanced investigations for their implementation at large scale for the removal of recalcitrant pollutants from polluted water. This book is divided is two sections, the first section covers the occurrence of emerging pollutants in environmental water while the second section covers state of the art research on the removal of emerging pollutants from water using sustainable technologies. A total of 13 chapters addressing various topics related to the two sections are essentially based on recent development in the respective field which could have a significant impact on the enhancement of the performance of wastewater treatment plants around the world and especially in developing countries where access to clean and safe water remains a daily challenge

Waste Management in the Fashion and Textile Industries Aug 27 2020 Waste Management in the Textiles Industry explores and explains the latest technologies and best practices for an integrated approach to the management and treatment of wastes generated in this industry. Provides a strong technological analysis of the manufacturing supply chain, including spinning, fabric production, finishing, garment manufacture, and the packaging of clothing Explains how textile technology perspectives feed into management decision-making about sustainability Addresses the industry’s impact on air and water quality and landfill waste

Proceedings of Second International Conference on Computing, Communications, and Cyber-Security Nov 29 2020 This book features selected research papers presented at the Second International Conference on Computing, Communications, and Cyber-Security (IC4S 2020), organized in Krishna Engineering College (KEC), Ghaziabad, India, along with Academic Associates; Southern Federal University, Russia; IAC Educational, India; and ITS Mohan Nagar, Ghaziabad, India during 3-4 October 2020. It includes innovative work from researchers, leading innovators, and professionals in the area of communication and network technologies, advanced computing technologies, data analytics and intelligent learning, the latest electrical and electronics trends, and security and privacy issues.

Zeolites Feb 13 2022 This book collects recent results about research activities on zeolites, from synthesis to application. It is composed of two sections. The first is devoted to articles and brief review articles on the synthesis of zeolite from fly ash and final application of these newly formed minerals to solve environmental problems. The second part of the book provides useful information on different applications both of natural and synthetic zeolites ranging from environmental pollution to industrial and commercial applications. The performance of zeolite molecular sieves, hollow titanium zeolites and luminescent zeolites is interesting considering the new frontiers reached by the research on zeolites. This book is a useful instrument for researchers, teachers and students who are interested in investigating innovative aspects of the studies on zeolite.

CIB W99“Photocatalysts in Advanced Oxidation Processes for Wastewater Treatment” Sep 08 2021 **CIB W99“Photocatalysts in Advanced Oxidation Processes for Wastewater Treatment”** 750, 00000000000000000000, 00000, 0000000000, 00000000, 0000 0000, 00000000, 0000000000000000

Photocatalysts in Advanced Oxidation Processes for Wastewater Treatment Nov 10 2021 Photocatalysts in Advanced Oxidation Processes for Wastewater Treatment comprehensively covers a range of topics aiming to promote the implementation of photocatalysis at large scale through provision of facile and green methods for catalysts synthesis and elucidation of pollutants degradation mechanisms. This book is divided into two main parts namely “Synthesis of effective photocatalysts” (Part I) and “Mechanisms of the photocatalytic degradation of various pollutants” (Part II). The first part focuses on the exploration of various strategies to synthesize sustainable and effective photocatalysts. The second part of the book provides an insights into the photocatalytic degradation mechanisms and pathways under ultraviolet and visible light irradiation, as well as the challenges faced by this technology and its future prospects.

ICT Analysis and Applications May 04 2021 This book proposes new technologies and discusses future solutions for ICT design infrastructures, as reflected in high-quality papers presented at the 6th International Conference on ICT for Sustainable Development (ICT4SD 2021), held in Goa, India, on 5-6 August 2021. The book covers the topics such as big data and data mining, data fusion, IoT programming toolkits and frameworks, green communication systems and network, use of ICT in smart cities, sensor networks and embedded system, network and information security, wireless and optical networks, security, trust, and privacy, routing and control protocols, cognitive radio and networks, and natural language processing. Bringing together experts from different countries, the book explores a range of central issues from an international perspective.

Frontiers in Wastewater Treatment and Modelling Oct 09 2021 This book describes the latest research advances, innovations, and applications in the field of water management and environmental engineering as presented by leading researchers, engineers, life scientists and practitioners from around the world at the Frontiers International Conference on Wastewater Treatment (FICWTM), held in Palermo, Italy in May 2017. The topics covered are highly diverse and include the physical processes of mixing and dispersion, biological developments and mathematical modeling, such as computational fluid dynamics in wastewater, MBBR and hybrid systems, membrane bioreactors, anaerobic digestion, reduction of greenhouse gases from wastewater treatment plants, and energy optimization. The contributions amply demonstrate that the application of cost-effective technologies for waste treatment and control is urgently needed so as to implement appropriate regulatory measures that ensure pollution prevention and remediation, safeguard public health, and preserve the environment. The contributions were selected by means of a rigorous peer-review process and highlight many exciting ideas that will spur novel research directions and foster multidisciplinary collaboration among different water specialists.

Global Health Watch 4 Oct 17 2019 Global Health Watch, now in its fourth edition, is widely perceived as the definitive voice for an alternative discourse on health and healthcare. It covers a range of issues that currently impact on health, including the present political and economic architecture in a fast-changing and globalized world; a political assessment of the drive towards Universal Health Coverage; broader determinants of health, such as gender-based violence and access to water; stories of struggles, actions and change; and a scrutiny of a range of global institutions and processes. It integrates rigorous analysis, alternative proposals and stories of struggle and change to present a compelling case for a radical transformation of the way we approach actions and policies on health.

FET Colleges Dec 11 2021

Micro-Electronics and Telecommunication Engineering Apr 15 2022 This book presents selected papers from the 3rd International Conference on Micro-Electronics and Telecommunication Engineering, held at SRM Institute of Science and Technology, Ghaziabad, India, on 30-31 August 2019. It covers a wide variety of topics in micro-electronics and telecommunication engineering, including micro-electronic engineering, computational remote sensing, computer science and intelligent systems, signal and image processing, and information and communication technology.

Expert Clouds and Applications Oct 29 2020 This book features original papers from International Conference on Expert Clouds and Applications (ICOECA 2021), organized by GITAM School of Technology, Bangalore,

India during February 18-19, 2021. It covers new research insights on artificial intelligence, big data, cloud computing, sustainability, and knowledge-based expert systems. The book discusses innovative research from all aspects including theoretical, practical, and experimental domains that pertain to the expert systems, sustainable clouds, and artificial intelligence technologies.

Advances in Engineering Materials, Structures and Systems: Innovations, Mechanics and Applications Oct 21 2022

Advances in Engineering Materials, Structures and Systems: Innovations, Mechanics and Applications comprises 411 papers that were presented at SEMC 2019, the Seventh International Conference on Structural Engineering, Mechanics and Computation, held in Cape Town, South Africa, from 2 to 4 September 2019. The subject matter reflects the broad scope of SEMC conferences, and covers a wide variety of engineering materials (both traditional and innovative) and many types of structures. The many topics featured in these Proceedings can be classified into six broad categories that deal with: (i) the mechanics of materials and fluids (elasticity, plasticity, flow through porous media, fluid dynamics, fracture, fatigue, damage, delamination, corrosion, bond, creep, shrinkage, etc); (ii) the mechanics of structures and systems (structural dynamics, vibration, seismic response, soil-structure interaction, fluid-structure interaction, response to blast and impact, response to fire, structural stability, buckling, collapse behaviour); (iii) the numerical modelling and experimental testing of materials and structures (numerical methods, simulation techniques, multi-scale modelling, computational modelling, laboratory testing, field testing, experimental measurements); (iv) innovations and special structures (nanostructures, adaptive structures, smart structures, composite structures, bio-inspired structures, shell structures, membranes, space structures, lightweight structures, long-span structures, tall buildings, wind turbines, etc); (v) design in traditional engineering materials (steel, concrete, steel-concrete composite, aluminium, masonry, timber, glass); (vi) the process of structural engineering (conceptualisation, planning, analysis, design, optimization, construction, assembly, manufacture, testing, maintenance, monitoring, assessment, repair, strengthening, retrofitting, decommissioning). The SEMC 2019 Proceedings will be of interest to civil, structural, mechanical, marine and aerospace engineers.

Researchers, developers, practitioners and academics in these disciplines will find them useful. Two versions of the papers are available. Short versions, intended to be concise but self-contained summaries of the full papers, are in this printed book. The full versions of the papers are in the e-book.

Microorganisms for Sustainable Environment and Health Jan 20 2020

Microorganisms for Sustainable Environment and Health covers hazardous pollutants released from natural as well as anthropogenic activities and implications on environmental and human health. This book serves as a valuable source of basic knowledge and recent developments in the clean technologies and pollution-associated diseases and abnormalities in the context of microorganisms. Focused on current solutions to various environmental problems in the field of bioremediation, it provides a detailed knowledge on the various types of toxic environmental pollutants discharged from different sources, their toxicological effects in environments, humans, animals and plants as well as their biodegradation and bioremediation approaches. This book helps environmental scientists and microbiologists learn about existing environmental problems and suggests ways to control or contain their effects by employing various treatment approaches. Provides information on waste treatment approaches using microbes Includes applications in biofuel and bioenergy production Covers green belt development, hydroponics, phytoremediation, wetland treatment technology, and common effluent treatment plants (CETPs) Discusses dissemination of antibiotic resistance among pathogenic microbes and strategies to combat multi-drug resistance (MDR)

Transactions on Engineering Technologies May 16 2022 This volume contains thirty-nine revised and extended research articles, written by prominent researchers participating in the World Congress on Engineering and Computer Science 2014, held in San Francisco, October 22-24 2014. Topics covered include engineering mathematics, electrical engineering, circuit design, communications systems, computer science, chemical engineering, systems engineering and applications of engineering science in industry. This book describes some significant advances in engineering technologies and also serves as an excellent source of reference for researchers and graduate students.

Insights and Innovations in Structural Engineering, Mechanics and Computation Sep 20 2022 Insights and Innovations in Structural

Engineering, Mechanics and Computation comprises 360 papers that were presented at the Sixth International Conference on Structural Engineering, Mechanics and Computation (SEMC 2016, Cape Town, South Africa, 5-7 September 2016). The papers reflect the broad scope of the SEMC conferences, and cover a wide range of engineering structures (buildings, bridges, towers, roofs, foundations, offshore structures, tunnels, dams, vessels, vehicles and machinery) and engineering materials (steel, aluminium, concrete, masonry, timber, glass, polymers, composites, laminates, smart materials).

Catalogue of the Library of the Institution of Civil Engineers ...

Feb 01 2021

Cape peninsula Mar 02 2021

Engineering Transactions On Engineering Sciences: Special Issue For The International Association Of Engineers Conferences 2016 Nov 22 2022

Two large international conferences on Advances in Engineering Sciences were held in Hong Kong, March 16-18, 2016, under the International MultiConference of Engineers and Computer Scientists (IMECS 2016), and in London, UK, 29 June - 1 July, 2016, under the World Congress on Engineering (WCE 2016) respectively. This volume contains 21 revised and extended research articles written by prominent researchers participating in the conferences. Topics covered include engineering mathematics, computer science, electrical engineering, manufacturing engineering, industrial engineering, and industrial applications. The book offers state-of-the-art advances in engineering sciences and also serves as an excellent reference work for researchers and graduate students working with/on engineering sciences.

Facility and Infrastructure Management Symposium 2009 Feb 25 2023

The Universal Electrical Directory (J.A. Berly's). Aug 19 2022

Reflections of South African University Leaders: 1981 to 2014 Apr 22 2020

Much has been written about the ever-growing demands on university leadership worldwide in the face of increasingly complex changes and challenges from within the academy and beyond. However, as we are reminded by Johan Muller in the Introduction to this book, "there are particular features of time and place that also throw up unique problems". It is precisely 'time and place' that make this set of reflections by university leaders quite remarkable and distinguishes it from the many biographies to be found in the literature on higher education leadership. ... In the main, this collection spans two decades, the 1990s and 2000s, of unprecedented levels of change in South African higher education. Leaders in universities, as well as those responsible for higher education policy in the government and associated statutory bodies, had no neat script to work off, nor 'manuals' or prescripts of 'good' leadership or practice. Instead, there was palpable excitement about collectively imagining and nurturing a new post-apartheid higher education system, which would contribute to the social and economic development needs of the country, the deepening of democracy and which would also be globally relevant. Most reflections touch on the coalface of leadership, which is the face-to-face interactional dimension, dealing with staff, with students, with council chairs. What comes through clearly, is the importance of what are sometimes called 'people skills'. In these accounts this is not simply presented as a human relations aptitude, for a number of reasons, first of which is the special nature of universities and their occupants. More than one points out the special challenge of managing the talented people that are academics, and their inbuilt distaste for bureaucracy, their reluctance to be managed or told what to do. The message here is consistently one of needing to be completely open with academics, the importance of maintaining the distinction between 'collegial' and 'executive' management (avoiding 'managerialism'), and the critical importance of winning and holding their trust. The inspiration for this collection arose in late 2013 in the Council on Higher Education's (CHE) Monitoring and Evaluation Directorate, the directorate responsible for conducting research on the higher education landscape and monitoring the state of the sector. They noted that conditions besetting universities had grown increasingly complex, both globally but more especially locally, and the question arose - how had this altered the challenges to university leadership over the period between the new political dispensation and the second decade of the new millennium? More particularly, how had leaders with a proven track record of visionary and strong leadership during this period faced these challenges? How did they see the main changes that needed dealing with? What challenges did these changes pose and how were they successfully overcome? What did they think, looking back, were the main constituents of successful leadership and management? What wisdom could be distilled for posterity? The Directorate decided to invite a range of vice-chancellors and senior academic leaders who had

completed their terms of office to contribute to a project that set out to gather such reflections and compile them into a publication.

Systems, Software and Services Process Improvement Jan 12 2022

This volume constitutes the refereed proceedings of the 27th European Conference on Systems, Software and Services Process Improvement, EuroSPI conference, held in Düsseldorf, Germany, in September 2020*. The 50 full papers and 13 short papers presented were carefully reviewed and selected from 100 submissions. They are organized in topical sections on visionary papers, SPI manifesto and improvement strategies, SPI and emerging software and systems engineering paradigms, SPI and standards and safety and security norms, SPI and team performance & agile & innovation, SPI and agile, emerging software engineering paradigms, digitalisation of industry, infrastructure and e-mobility, good and bad practices in improvement, functional safety and cybersecurity, experiences with agile and lean, standards and assessment models, recent innovations, virtual reality. *The conference was partially held virtually due to the COVID-19 pandemic.

Intelligent Computing & Optimization Jul 26 2020 This book of Springer Nature is another proof of Springer's outstanding and greatness on the lively interface of Smart Computational Optimization, Green ICT, Smart Intelligence and Machine Learning! It is a Master Piece of what our community of academics and experts can provide when an Interconnected Approach of Joint, Mutual and Meta Learning is supported by Modern Operational Research and Experience of the World-Leader Springer Nature! The 5th edition of International Conference on Intelligent Computing and Optimization took place at October 27-28, 2022, via Zoom. Objective was to celebrate "Creativity with Compassion and Wisdom" with researchers, scholars, experts and investigators in Intelligent Computing and Optimization across the planet, to share knowledge, experience, innovation—a marvelous opportunity for discourse and mutuality by novel research, invention and creativity. This proceedings book of ICO'2022 is published by Springer Nature—Quality Label of wonderful.

ACRID 2017 Nov 17 2019 The Conference Theme was: "Moving Africa forward through Engineering, Technology and Innovation". The conference brought together academics, researchers and industrialists from many disciplines, in particular those that have the most impact on Africa's Development. Most conferences on the continent have covered limited disciplines and therefore the opportunity has been lost sharing information, results and knowledge in a way which can solve the many contentious issues, most of which can be solved through a multidisciplinary approach.

The Feasibility of a Congestion Charge for Cape Town Central Business District from a Traffic Engineering Perspective May 24 2020

Parched - The Cape Town Drought Story Apr 03 2021 The book presents the history of water supply to Cape Town, leading up to the worst ever drought recorded, through political turmoil impacting on drought interventions and resulting in the adoption of an integrated water strategy. Regions reliant on water supply from rainfed dams have always been vulnerable to the impact of drought. This is exacerbated by the uncertainty of future rainfall, which is never guaranteed, and reliance is placed on modelling using historic data. While weather has always been variable, climate has been generally reliable. With anthropogenic activity causing changes in climate, the validity of modelling based on history is currently not fully trusted. Unless the storage capacity is sufficient to carry through numerous seasons of poor rainfall, even with water restrictions to match demand and supply in times of depleted rainfall, the risk of reservoirs running dry remains a threat.

J.A. Berly's Universal Electrical Directory and Advertiser Jan 24 2023

Re-imagining Curriculum Jul 06 2021 The book argues that academics, academic developers and academic leaders need to undertake curriculum work in their institutions that has the potential to disrupt common sense notions about curriculum and create spaces for engagement with scholarly concepts and theories, to re-imagine curricula for the changing times. Now, more than ever in the history of higher education, curriculum practices and processes need to be shared; the findings of research undertaken on curriculum need to be disseminated to inform curriculum work. We hope the book will enable readers to look beyond their contextual difficulties and constraints, to find spaces where they can dream, and begin to implement, innovative and creative solutions to what may seem like intractable challenges or

difficulties.

Knowledge Beyond Colour Lines Jun 17 2022 Knowledge remains timely in education. The need for academics to contemplate its relevance, worth, use and everything in-between deems a continuous intellectual project, rather than a conundrum to be solved. This book takes the South African context by the horns as it challenges the often dormant and traditionalist ways in which higher education spaces see knowledge. Through original research and the voices of academics and students, this book argues for repurposing knowledge generation, knowledge sharing and critical pedagogy so that more inclusive teaching and learning environments can be both imagined and sustained. The contentious tensionalities that this creates for LoLT and SoTL, in particular, are unlocked so as to trouble the South African higher education landscape with the intent to proffer alternative pathways for a knowledge beyond colour lines. Prof Shan Simmonds (PhD) NWU This edited volume bristles with fresh scholarly approaches and insights of an emergent generation of engaged scholars grappling with the issues and problems of higher education in South Africa. The issues dealt with here are varied and encompassing. They are treated with intellectual delicacy and probing sensitivity, articulacy, informed data and bold conclusions. They serve well! Prof. Kwesi Kwaa Prah Emeritus Professor of Sociology, University of the Western Cape Founder of the Centre for Advanced Studies of African Society

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- [Critical Project Leadership Competencies In Mechanical Engineering In The Cape Town Municipal Area South Africa](#)
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