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Nota di contenuto	Review on synthesis of iron doped TiO <sub>2</sub> nanoparticles -- Microbial degradation of conventional polyethylene waste: current status and future prospective -- Biological and thermochemical strategies for building biorefinery platform -- Advanced oxidation processes for wastewater treatment: perspective through nanomaterials -- Coal gasification in a circulating fluidized bed -- Carbon sequestration and capturing technologies-a review -- Feasibility evaluation of reactive distillation process for the purification of bioethanol -- A review of alternative sustainable methods of ammonia production -- Experimental analysis of spherical five hole flow analyzer for subsonic wind tunnels -- Incident heat flux measurements with efficient plate thermometer in the fire test environment -- Comparison of experimental and simulations for esterification process for recovery of acetic acid by reactive distillation -- Development and evaluation of softcomputing models for monatana flume aeration -- Physicochemical and pyrolysis kinetic aspects of biomass feedstocks: an overview -- Air pollution modelling for Jharia region, in India -- Kinetic studies for the esterification of propionic acid with 1-butanol process with ionic resin catalyst -- Preparation and characterization of amine modified activated carbon from corncobs for carbon dioxide capture --

Electrolyte role in electrocoagulation process for nitrates removal from groundwater -- A review on titanium dioxide based photocatalytic cement: self-cleaning cement -- A review on the valorization of biorefinery based waste lignin: exploratory potential market approach -- Chelating poly (amidoxime) and poly (hydroxamic acid) derived from co-polymers of butyl acrylate, acrylonitrile and cinnamic acid used as metal ion sorbents: a brief review -- Stabilization of expansive soil with thermal power plant waste (fly ash and coal bottom ash)- a review -- Synthesis, properties and photo catalytic application of cadmium based quantum dots: a review -- In-silico identification of potential phytochemicals against human protease activated receptor-2 (par2) involved in rheumatoid arthritis -- Crop residues: a potential bioenergy resource -- Kinetics analysis of solid state reaction for the synthesis of lithium orthosilicate -- An assessment of ghg emission reduction by using renewable energy and energy efficient processes -- Removal of fluoride using nanoparticles of Fe<sub>2</sub>O<sub>3</sub> with Al<sub>2</sub>O<sub>3</sub> and activated sugarcane bagasse -- In silico characterization and structural modeling of proteins involved in arsenic tolerance of hyperaccumulating fern *Pteris vittata* -- Potential application of carbon nanotubes membranes in water and wastewater treatment: a review -- Remediation of crude oil contaminated kaolin clay -- Cost and global warming optimization through landfill reuse and integrated waste management for Kolkata -- Evaluation of abrasive wear of bio-waste based silica/carbon particulate epoxy composites -- Analysis and comparison of mechanical properties of a specimen by using FEA -- Use of multi-criteria decision-making techniques for selecting waste-to-energy technologies -- Environmental impact of application of ozone bleaching for production of pulp from agro based fibrous materials - an innovative approach -- Perception towards infection control measures among health care providers' working in selected hospitals of Goa -- Assessment of catalytic biodiesel production: a mini-review -- Analysis of fire and explosion hazard of LPG tanker truck accident: a case study -- A review on the divergent pathways used in the purification of biodiesel -- Fenton assisted ultrafiltration for removal of cod of reactive black 5 dye from synthetic wastewater -- Synthesis of biodegradable composite films from polyvinyl alcohol (PVA)/ amla leaf fibre (ALF) for packaging application -- A critical appraisal of biomedical waste management in Uttar Pradesh -- Legacy waste characterization: bio-mining solution for landfills and resource recovery towards circularity -- Hydrogen utilisation via ammonia borane dehydrogenation and regeneration: a review -- Water conservation strategies & opportunities for sustainability of pulp & paper sector – an overview of recent trends -- Sequestering of heavy metal ions from aqueous stream by raw and modified lignocellulosic materials -- Synthesis of iron nanoparticles loaded proton exchange membrane for microbial fuel cell application -- Ferrofluids for wastewater treatment -- Thermal performance study of quarterly-divided cylindrical pin fins under natural convection -- Chitosan - derivatives, properties and applications -- Do millennial exhibit environmentally responsive consumption behaviors - a study on determinants of green purchase decision? -- Screening of organic solvents for separation of thiophene and iso-octane: density functional theory and molecular dynamic simulations -- Optimization of lactobacillus and aspergillus niger biobeads formation for the removal of reactive yellow dye from wastewater -- Fast pyrolysis of coconut coir in solar energy embedded fixed bed tubular reactor -- Study of some magnetic effects of mg substituted hexaferrite in nano range -- Eco-friendly ceramic membranes from inexpensive raw materials and their applications --

Therapeutic potential of seleno-compounds in cancer- an overview -- Photocatalytic degradation of amaranth dye from water using TiO<sub>2</sub>-BiOI nanocomposite -- Reduction of fluoride from domestic waste water by using activated diatomaceous earth -- An inside for the treatment of tannery industry effluent -- Enrichment of anammox in sequencing batch reactor (SBR) -- Overview of gel casted fused silica ceramics -- Curing of epoxy resin by using commercial amine/hydrazine and its effect on ultra violet spectrum -- An introduction to bioenergy, biofuel, and bio refining -- Optimization of extraction parameters and evaluation of functional properties of protein isolate obtained from cottonseed meal -- MOF encapsulated beads for fluoride removal from water -- Non-catalytic and catalytic co-pyrolysis of lignocellulosic-lignocellulosic waste -- Separation of congo red dye from water using AgNPs based hybrid UF membrane -- Synthesis and characterization of copper (ii) Schiff base metal complex for environmental remediation -- Environmental impact assessment of potato cultivation in northern India -- Evaluation of drugs as corrosion inhibitors for metals: a brief review -- Groundwater quality assessment by using water quality index for block abohar, district fazilka in Punjab -- Sustainable approach to biodiesel production using hydrodynamic cavitation route -- Electrochemical treatment of sulphidic spent caustic waste stream generated from petroleum refineries -- Lignin based hydrogel production and their applications. .

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#### Sommario/riassunto

This book focuses on the state-of-the-art research, development, and commercial prospective of recent advances in chemical sciences. The innovative work in the field of Environmental Engineering, Bio-chemical Engineering, Chemical Engineering, Nanotechnology, Environment Impact Assessment, Green Technologies. The contents in this book cover various design concepts and control and optimization for applications in Chemical, Bio and Environmental Engineering, manufacturing, Physics, Chemistry and Biological sciences. This book will be useful resource for researchers, academicians as well as professionals interested in the highly interdisciplinary field of Chemical, Bio and Environmental Engineering.

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