

Table of Contents

Preface

Chapter 1: Equipment and Service Technologies for Renewable Energy Production

Comparative Study of Four Transparent Hydrophobic Coatings for Water Saving Potential in Dust Cleaning Context of Solar Power Plants

N. Sengar and K. Shringi 3

Design and Numerical Modelling of Highway Vertical Axis Wind Turbine

G. Kapoor, G. Saini and M. Zunaïd 13

Chapter 2: Thermal Engineering

Experimental Study of Steam Generation through Solar Parabolic Trough Collector for Prospective Use in Small Industries

A. Sharma and N. Sengar 29

Lattice Boltzmann Solution of Transient Heat Conduction Problem in an Infinite Slab Coupled with Non-Linear Heat Generation

A. Sahu and S. Bhowmick 41

Chapter 3: Vehicle Engineering

Side Impact Crashworthiness of EVs: A Numerical Study in Material Efficacy

F. Shahid, H. Tiwari, M. Panwar and V. Gautam 53

Braking Dynamics of a Tadpole Type Three-Wheeler

M. Sahani, B. Keerthi, A. Srikanth, M. Mandara and S.S. Patil 65

Chapter 4: Mechatronics

Fabrication of a Hand Gesture Controlled Wheelchair

A. Shukla, A.K. Jha, S. Pahal, V. Tyagi and A. Solanki 79