

**Article ID**

Role of hydrothermal temperature on crystallinity, photoluminescence, photocatalytic and gas sensing properties of TiO <sub>2</sub> nanoparticles..... ..... M Malligavathy, S Iyyappushpam, S T Nishanthi and D Pathinettam Padiyan	44
Bäcklund transformation and soliton solutions in terms of the Wronskian for the Kadomtsev–Petviashvili-based system in fluid dynamics..... ..... Zhong Du, Bo Tian, Xi-Yang Xie, Jun Chai and Xiao-Yu Wu	45
Neutron radiation damage studies in the structural materials of a 500 MWe fast breeder reactor using DPA cross-sections from ENDF/B-VII.1 .....	46
..... Uttiyoarnab Saha, K Devan, Abhitab Bachchan, G Pandikumar and S Ganesan	
Development of a collinear laser spectrometer facility at VECC: First test result..... ..... Md Sabir Ali, Ayan Ray, Waseem Raja, Arup Bandyopadhyay, Vaishali Naik, Asish Polley and Alok Chakrabarti	47
Volterra integral equation-factorisation method and nucleus–nucleus elastic scattering .....	48
..... U Laha, M Majumder and J Bhoi	
Impact of depth and location of the wells on vibrational resonance in a triple-well system .....	49
..... Zhijuan Chen and Lijuan Ning	
Synchronisation, electronic circuit implementation, and fractional-order analysis of 5D ordinary differential equations with hidden hyperchaotic attractors..... ..... Zhouchao Wei, Karthikeyan Rajagopal, Wei Zhang, Sifeu Takougang Kingni and Akif Akgül	50
Nucleus-acoustic shock waves in white dwarfs..... ..... S Jannat and A A Mamun	51
A chaotic jerk system with non-hyperbolic equilibrium: Dynamics, effect of time delay and circuit realisation..... ..... Karthikeyan Rajagopal, Viet-Thanh Pham, Fadhil Rahma Tahir, Akif Akgul, Hamid Reza Abdolmohammadi and Sajad Jafari	52
Novel patterning of CdS/CdTe thin film with back contacts for photovoltaic application..... ..... Murugaiya Sridar Ilango and Sheela K Ramasesha	53
Control and synchronisation of a novel seven-dimensional hyperchaotic system with active control .....	54
..... Metin Varan and Akif Akgul	
Some dynamical aspects of interacting quintessence model..... ..... Binayak S Choudhury, Himadri Shekhar Mondal and Deboesmita Chatterjee	55

Indexed in CURRENT CONTENTS ISSN 0304-4289

Edited and published by Amitabh Joshi  
for the Indian Academy of Sciences, Bengaluru 560 080  
Printed at Tholasi Prints India Pvt. Ltd., Bengaluru

Registered with Registrar of Newspapers in India, Vide Regn No. 24935/73

Regn. No. KRNA/BGE/337/2018–2020, published on 10/04/2018

Licensed to Post without prepayment No. 49

Posted at Bengaluru PSO, Mysore Road, Bengaluru 560026 16/04/2018