SAR 2023-24 Self Assessment Report

CRITERION 6 Faculty Profile & Research Activities

Sub-criterion 6.9

Number of Books Published/ Chapters in Books

Sr.No.	Teachers' Name	No. of Chapter in Books	Chapter Name
1	Prof. Amit Kumar Sharma	1	Perovskite Materials for Photovoltaic Application
2	Dr. Kumari Sujata	1	पर्यावरण संकट का स्वरूप:वर्तमान समय में

Materials Science

Advanced Materials for Next-Generation Technologies

Challenges and New Prospects

Editors: Shrikaant Kulkarni, PhD
Vipul Srivastava, PhD
Rabah Khenata, PhD
Yarub Al-Douri, PhD

Ordering Info/Buy Book

In Production
Pub Date: Forthcoming December 2024
Hardback Price: $200 US | £150 UK
Hard ISBN: 9781774917800
E-Book ISBN: 9781003558712
Pages: Est. 366pp w/index
Binding Type: Hardback / ebook
Notes: 9 color and 73 b/w illustrations

Advanced materials exhibiting novel properties with increased functionality are the future of technology. These materials have the potential to improve people's quality of life as well as to make affordable sustainable materials a reality. This new book, **Advanced Materials for Next-Generation Technologies: Challenges and New Prospects**, presents an enlightening insight into the advances in materials with special reference to their structure, physical behaviors, and applications.

This book sheds light on the organizational and orientational order of the atoms responsible for characteristics and distinct architectures in these materials. It also discusses how the materials can be maneuvered for attaining structural optimality. It explores novel materials for new technologies that make use of their interesting and exciting properties, such as electronic band structure, band gap, half-metallicity, multi-feroic behavior, piezoelectricity, thermoelectricity, thermodynamics, optoelectronic behavior, and more.

The book details novel materials for applications in frontier areas, discussing perovskites as promising materials for the future technology. It also discusses synthesis protocols for the design and development of some novel materials, spinel material synthesis and its structural analysis, green synthesis of metal oxides, etc. The book explores the property profiles of the materials for behavioral change, discussing materials such as ZnO nanostructures, ternary iron arsenide CaFe2As2, Cs-based halide double perovskites etc., and presenting a comprehensive pool of information on the latest advancements in this growing field.

The book will be of interest to researchers, academicians, and scientists in the field of materials science and technology, computational physics, industrial technology, and related fields.

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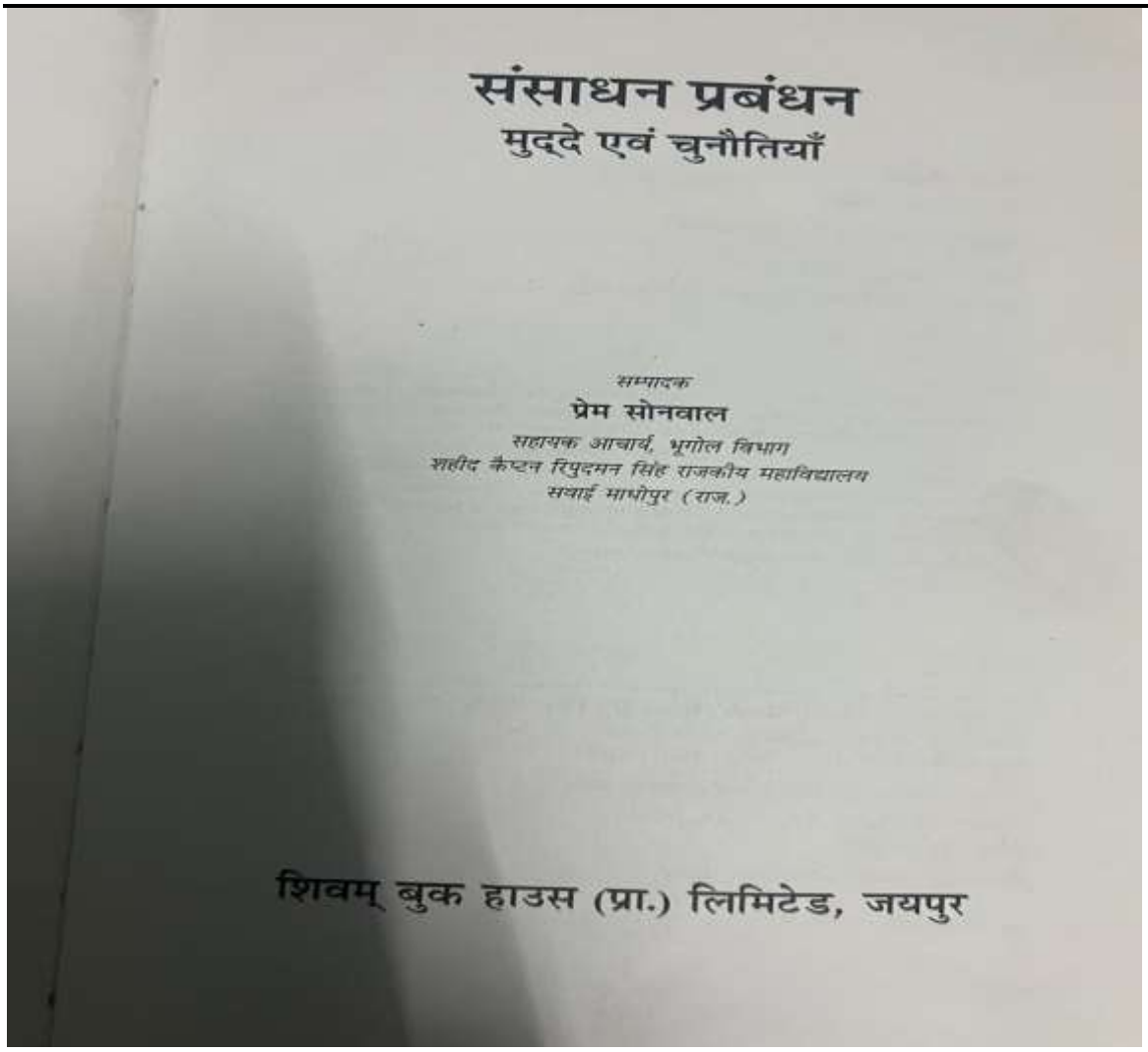
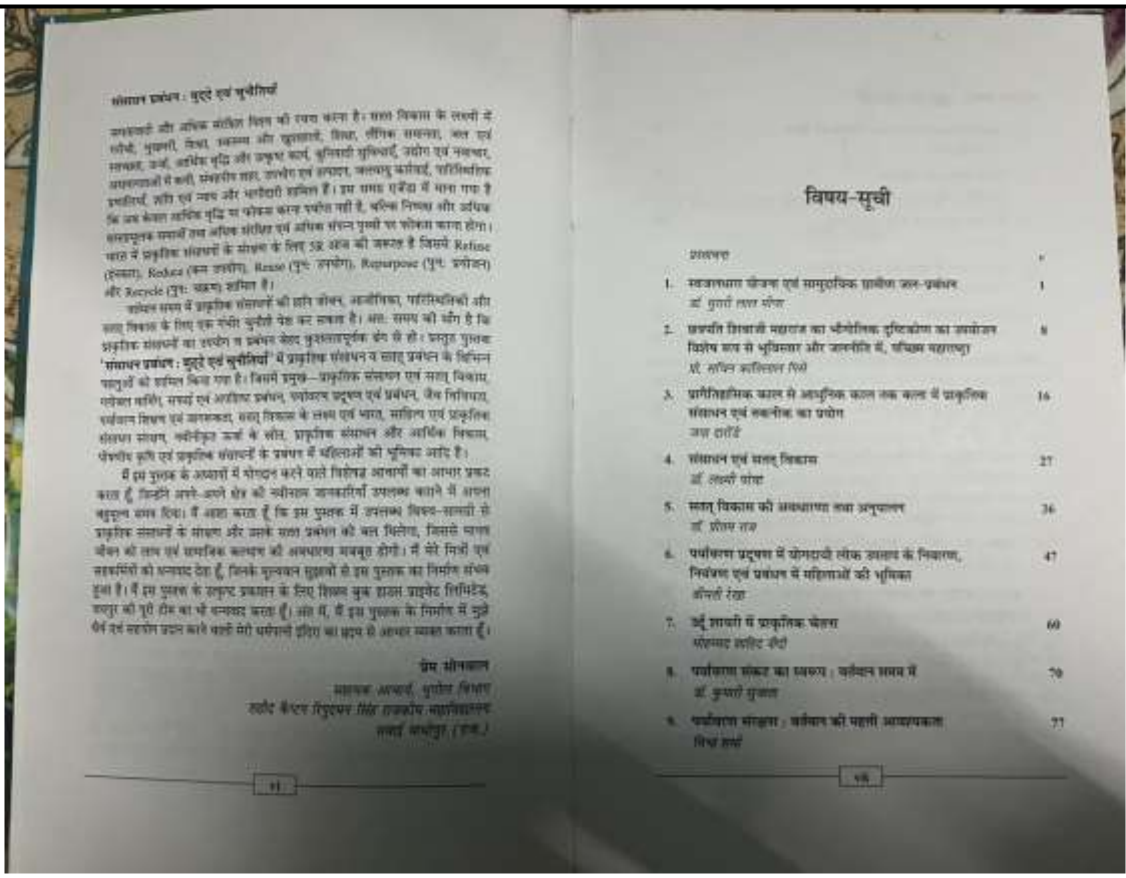


संसाधन प्रबंधन
मुद्दे एवं चुनौतियाँ

सम्पादक
प्रेम सोनवाल
सहायक आचार्य, भूगोल विभाग
शहीद कैप्टन रिपुदमन सिंह राजकीय महाविद्यालय
सवाई माधोपुर (राज.)

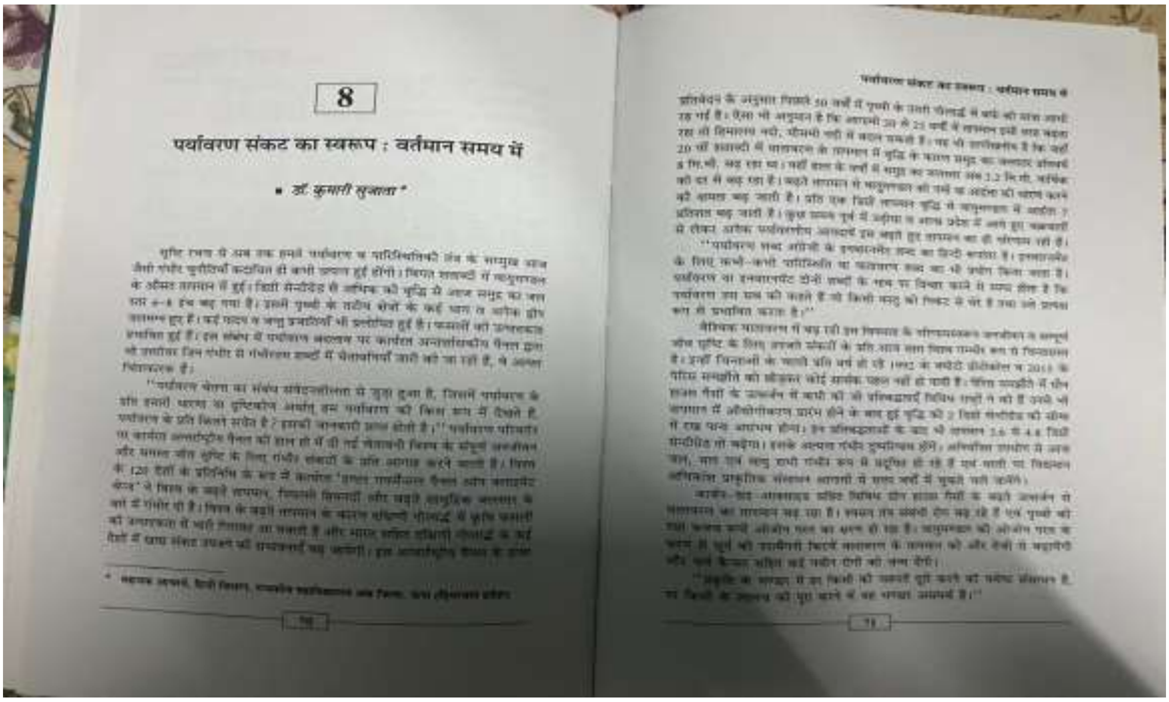
शिवम् बुक हाउस (प्रा.) लिमिटेड, जयपुर



संसाधन प्रबंधन : मुद्दे एवं चुनौतियाँ

प्रेम सोनवाल

विषय-सूची



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पर्यावरण संकट का स्वरूप : वर्तमान समय में

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