1. Record Nr. UNINA9910789105403321

Titolo	Mechanical stress evaluation by neutrons and synchrotron radiation VII : selected, peer reviewed papers from the 7th International Conference on Mechanical Stress Evaluation by Neutrons and Synchrotron Radiation (MECA SENS VII 2013), September 10-12, 2013, Sydney, Australia / / edited by Thomas M. Holden, Ondrej Muransky and Cory J. Hamelin
Pubbl/distr/stampa	Durnten-Zurich, Switzerland : , : Trans Tech Publications Ltd, , [2014] ©2014
ISBN	3-03826-383-4
Descrizione fisica	1 online resource (275 p.)
Collana	Materials science forum, , 0255-5476 ; ; volume 777
Disciplina	620.11
Soggetti	Strains and stresses
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Mechanical Stress Evaluation by Neutrons and Synchrotron Radiation VII; Preface and Organizing Committee; Table of Contents; Study of Microstructure, Texture and Residual Stress in Asymmetrically Rolled Titanium; Improving Beamtime Efficiency for Residual Stress Neutron Experiments; Engineering & Related Studies at J-PARC; The Role of Metallurgical Solid State Phase Transformations on the Formation of Residual Stress in Laser Cladding and Heating; Quantification and Prediction of Residual Stresses in Creep Crack Growth Specimens A Mirror Furnace for In Situ Residual Stress Measurements by Neutron DiffractionThermal-Effect Study on a Carbon-Carbon Composite Using Synchrotron X-Ray Measurements & Molecular Dynamics Simulation; Residual Stress Distributions at High Strength Steel Welds Prepared by Low Transformation Temperature (LTT) and Conventional Welding Consumables; A Validated Numerical Model for Residual Stress Predictions in an Eight-Pass-Welded Stainless Steel Plate; Load-Sharing in -Processed Inconel 718; Measurement of Forming Stresses in Plain Spherical Bearings Using Neutron Diffraction Study of Asymmetric Rolling of Titanium by the Finite Elements Method with Implemented Crystalline ModelNeutron Texture Diffractometer at China Advanced Research Reactor; Residual Stresses Associated with

the Production of Coiled Automotive Springs; Residual Strains in ITER Conductors by Neutron Diffraction; Neutron Diffraction and Acoustic Emission Study of Mg-Al-Sr Alloy Reinforced with Short Saffil® Fibers Deformed in Compression; Neutron Diffraction Residual Stress Measurements in Electron Beam Welded Compact Tension Specimens
Influence of Beam Divergence on Pseudo-Strain Induced in Time-of-Flight Neutron DiffractionDemonstration of near Field High Energy X-Ray Diffraction Microscopy on High-Z Ceramic Nuclear Fuel Material; In Situ Three-Dimensional Orientation Mapping in Plastically-Deformed Polycrystalline Iron by Three-Dimensional X-Ray Diffraction; Measurement of Residual Stresses in Titanium Aerospace Components Formed via Additive Manufacturing; Micromechanical Behavior of Solid-Solution-Strengthened Mg-1wt.%Al Alloy Investigated by In Situ Neutron Diffraction
Strain and Texture Investigations by Means of Neutron Time-of-Flight Diffraction: Application to Polyphase GneissesCrystal Plasticity Finite Element Analysis Based on Crystal Orientation Mapping with Three-Dimensional X-Ray Diffraction Microscopy; Temperature Induced Internal Stress in Carrara Marble; Internal Stress Measurement of Weld Part Using Diffraction Spot Trace Method; The New Materials Science Diffractometer RSD at CIAE; Characterization of Thermally Stable Diamond Composite Material; Investigation of Residual Stresses Distribution in Titanium Weldments
Evaluation of Ductile Damage Progress of Aluminum Single Crystal with Prior Activity of Single Slip System under Tensile Loading by Using Synchrotron White X-Ray

Sommario/riassunto

The collection shows the importance of neutron and synchrotron radiation in the evaluation of mechanical stresses. It gathers the current knowledge from those concerned with the mechanical stress evaluation of materials and components using neutron and synchrotron radiation. It also gives an interesting ""snap-shot"" of progress in the field. The wide array contributions focus on the following key topics: Stress evaluation using neutrons, synchrotron radiation and X-rays; Development of measurement methods and instrumentation; Material processing and residual stresses; The influence of residua

2. Record Nr. UNINA9910640378403321

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Titolo	Climate Risks to Water Security : Framing Effective Response in Asia and the Pacific / / edited by Hemant Ojha, Nicholas Schofield, Jeff Camkin
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Palgrave Macmillan, , 2023
ISBN	9783031166488 3031166485
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (309 pages)
Collana	Palgrave Studies in Climate Resilient Societies, , 2523-8132
Disciplina	363.7387456095 333.91
Soggetti	Environmental sciences - Social aspects Environmental management Environmental geography Environmental policy Climatology Environmental Social Sciences Environmental Management Integrated Geography Environmental Policy Climate Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface and Acknowledgements -- Contents -- Contributors -- Abbreviations -- List of Figures -- List of Tables -- 1 Introduction -- 1 Why This Book? -- 2 The Growing Climate Risk to Water Security -- 3 Socio-Ecological Zones and Basins as Sites of Climate-Water Risks -- 4 Chapters Overview -- References -- 2 Water Security and Spring Conservation in the Himalaya -- 1 Introduction -- 2 Declining Himalayan Springs -- 2.1 Anecdotal Evidence in Absence of Long-Term Monitoring -- 2.2 Deterioration of Spring Water Quality -- 3 Climate and Socio-Economic Drivers of Changes in Himalayan Springs -- 3.1 Climatic Drivers of Changes in Himalayan -- 3.1.1 Springs Temperature

Rise in the Himalaya -- 3.1.2 Role of Snowmelt -- 3.1.3 Extreme Events (Landslides &amp -- Flash Floods) -- 3.1.4 Land-Use &amp -- Land-Cover Change (LU&amp -- LCC) -- 4 Socio-Economic Drivers of Changes in Himalayan Springs -- 4.1 Infrastructure-Dams &amp -- Tunnelling, Road Cutting, Mining or Quarrying -- 4.2 Urbanization and Tourism -- 4.3 Gender and Caste -- 5 State and Community Responses for Spring Conservation and Revival in Himalaya -- 5.1 Traditional Knowledge Systems for Spring Conservation -- 5.2 Early Research and the Spring-Sanctuary Model -- 5.3 Hydrogeology-Based Spring Rejuvenation Programmes -- 5.4 Policy (State &amp -- National Recognition) -- 6 Gaps and Future Directions -- References -- 3 Water Stresses and Responses in Myanmar's Central Dry Zone -- 1 Central Dry Zone -- 2 Impacts of Climate Change and Development on Water -- 3 Water Management in the CDZ -- 4 Rehabilitation of Pyawt Ywar Pump Irrigation Project -- 5 Restoring Artesian Aquifers in the Pale Sub-Basin -- 5.1 Groundwater Irrigation Development -- 5.2 Groundwater Management-Issues and Constraints -- 5.3 Groundwater Management and Rehabilitation of the Tube Wells -- 6 Discussion -- 7 Key Lessons.
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4 How Is Climate Risk Manifesting with Regard to Water Security? -- 5 Patterns of Response to Address Risks -- 6 Emerging Themes and Lessons -- 7 Conclusions -- Index.

Sommario/riassunto

“Water is the primary medium through which the impacts of climate change are manifested. This book fleshes out the latest and contemporary science required to inform decision-making that spans from climate risk assessment to developing conducive policy measures in different socio-ecological zones for one of the most vulnerable regions in the world.” – Mukand Babel, Professor at Asian Institute of Technology and David Molden - former DG of ICIMOD and former DDG of IWMI “The experiences, insights and key lessons drawn from ground-based experiences across the Asia-Pacific are essential for water professionals worldwide grappling with how to deliver water

security in the face of climate change. The authors and editors have done a commendable job in bringing to life a set of diverse realities, and then drawing timely lessons for all of us". – David Molden This book takes stock of how climate change isimpacting water security, across diverse socio-ecological zones and river basins in the region. It shows how interactions between climate, society, environment, and hydrology are exacerbating water insecurity. The book showcases emerging operational, management and policy responses, highlighting contextual lessons for securing the region's water future under changing climate. Chapters are written by researchers and practitioners engaged in a variety of socio-ecological zones, such as Himalayan springs, coastal cities, deltas, dry zones, wetlands, and Pacific islands, plus basin-scale analysis of the Yangtze, Murray-Darling and Lower Mekong. Through intersectoral analysis and a risk-focused approach, this book makes an important contribution to water management and climate resilience in the Asia-Pacific region and beyond. Hemant Ojha is Associate Professor, University of Canberra, and Principal Advisor, IFSD, Sydney. Nicholas Schofield is Professorial Fellow, University of NSW, and Director Global Future Research. Jeff Camkin is Adjunct Professor, University of Western Australia and founding Editor-in-Chief, World Water Policy Journal. .