

CONTENTS

Research Reports

A Study on Early Detection of Fatigue Damage in Thrust Ball Bearing Using Acoustic Emission Technique	Alan HASE	3
--	-----------	---

Characterization of Catalytically Active Mo Species on H-MFI for Methane Dehydroaromatization by Means of Mo L _{III} -Edge XANES	Subaru MOGI, Kenta KURAMOCHI, Ryo YAMAZAKI, Hiroyuki MIYANAGA, Shintaro SATO, Yuki NOZAWA and Hirofumi ARITANI	11
---	---	----

Optical Fiber Nonlinear Propagation Characteristics of M-ary Digital Coherent Optical Signal for High-Capacity and Long-Haul Optical Communication Systems	Yasuhiro AOKI	15
---	---------------	----

Asymmetry of Matter from the Resurgence	Tomohiro MATSUDA	23
---	------------------	----

Published Papers

Department of Mechanical Engineering		29
Department of Life Science and Green Chemistry		37
Department of Information Systems		43
Foundation Study Center		51
Advanced Science Research Laboratory		52

Activities

Department of Mechanical Engineering		57
Department of Life Science and Green Chemistry		58
Department of Information Systems		59
Foundation Study Center		61
Advanced Science Research Laboratory		61

Progressive Research

Department of Mechanical Engineering		65
Department of Life Science and Green Chemistry		73
Department of Information Systems		79
Foundation Study Center		85
Advanced Science Research Laboratory		86