

CONTENTS

PREFACE	i
CONTENTS	iii
ORGANIZATION	iv
CURRENT STATUS OF NewSUBARU	
<i>NewSUBARU Storage Ring</i>	1
<i>Beamlines</i>	2
<i>Improvement of beam injection using the injection bump waveform monitor at NewSUBARU</i>	9
<i>Development of automatic tune measurement and correction system at NewSUBARU storage ring</i>	11
RESEARCH ACTIVITIES	
<i>Laser-Compton Gamma-Ray Source by using 2μm Tm-Laser</i>	13
<i>Imaging for Stress Corrosion Cracking in Stainless Steel with Laser Compton Scattering Gamma Ray</i>	15
<i>Study of $^{12}\text{C}(\gamma, 2\alpha)^4\text{He}$ with NewSUBARU laser Compton scattered γ-ray beam</i>	17
<i>Laser-plasma debris from a rotating cryogenic-solid-Xe target</i>	20
<i>Mitigation by argon buffer gas of fast debris from cryogenic xenon laser plasma EUV light source</i>	22
<i>Mitigation effect of plasma debris from cryogenic xenon target by argon jet</i>	24
<i>Propose of Three-dimensional Micro Fluidics Device Using Centrifugal Force</i>	26
<i>Fabrication of electrodes for multiplex neural interface</i>	28
<i>Efficiency Microfluidic Reactor Chip Operated only using Surface-Acoustic-Wave</i>	30
<i>High-sensitive enzyme-linked immunosorbent assay in three-dimensional lab-on-a-CD</i>	32
<i>Mask Observation Results using a Coherent EUV Scattering Microscope at NewSUBARU</i>	34
<i>Imaging Performance Improvement of an Extreme Ultraviolet Microscope</i>	42
<i>Development of the Extreme Ultraviolet Interference Lithography System</i>	50
<i>High-Precision Analysis for Material Analysis Beamline at BL05 for Industrial Enterprises</i>	58
<i>Effect of the Soft X-ray on the Highly-Hydrogenated Diamond-Like Carbon Film</i>	60
<i>Photoemission Study of Hydrogenated Amorphous Carbon Thin Films as a Function of Annealing Temperature</i>	61
<i>Control of Oxygen Contamination in BN Thin Film Prepared by Reactive Magnetron Sputtering</i>	63
<i>Semi-quantitative analysis of carbon contamination on MLMs using high power EUV light</i>	65
<i>Electronic State of Ti in Ultra-fine Grained SUS316L-1%TiC</i>	67
<i>Fabrication of High Aspect Ratio Microcoils</i>	69
<i>Fabrication of X-ray Grating Using X-ray Lithography for X-ray Talbot Interferometry</i>	71
<i>Fabrication of High Hardness Ni Mold with Electroless Ni-B Thin Layer</i>	73
<i>Fabrication of Light Guide Plate for Ultraviolet Range</i>	75
<i>Fabrication of Micro Capacitive Inclination Sensor by Resin Molding Method</i>	77
LIST OF PUBLICATIONS	
<i>Papers</i>	79
<i>International Meetings</i>	83
<i>Awards</i>	90
ACADEMIC DEGREES	91
EDITORIAL BOARD	92