ISSN 1342-3177

/AE-AR-2022

Institute of Advanced Energy Kyoto University

ANNUAL REPORT REPORT 2 0 2 1



京都大学エネルギー理工学研究所

Institute of Advanced Energy, Kyoto University

ANNUAL REPORT

2021

Institute of Advanced Energy Kyoto University

Gokasho, Uji, Kyoto 611-0011 Japan

CONTENTS

	Foreword	******	1
1.	Staff List		2
2.	Organization Chart	*********	9
3.	Research Activities		11
	3-1. Research Activities in 2021	********	13
	Advanced Energy Generation Division		
	Quantum Radiation Energy Research Section	********	15
	Advanced Atomic Energy Research Section	********	21
	Advanced Plasma Energy Research Section	********	27
	Complex Plasma Systems Research Section	********	33
	Advanced Energy Conversion Division		
	Functional Materials Science and Engineering Research Section	on·····	41
	Advanced Laser Science Research Section	*********	45
	Advanced Energy Structural Materials Research Section	*********	49
	Nano Optical Science Research Section	*********	53
	Clean Energy Conversion Research Section		57
	Advanced Energy Utilization Division		
	Chemical Reaction Complex Processes Research Section		61
	Molecular Nanotechnology Research Section	• • • • • • • • • • • • • • • • • • • •	67
	Biofunctional Chemistry Research Section	*********	71
	Structural Energy Bioscience Research Section	********	77
	Laboratory for Complex Energy Processes		
	Self-Assembly Science Research Section		85
	Broad Band Energy Science Research Section		89
	Environmental Microbiology Research Section	********	93
	3-2. Award		97
4.	Joint Usage/Research Program		107
5.	Collaboration Works in the Laboratory for Complex Energy Processes		115
6.	Projects with Other Universities and Organizations		121
7.	How to get to the IAE	1	124

3. RESEARCH ACTIVITIES

3-1. RESEARCH ACTIVITIES IN 2021



Gokasho, Uji, Kyoto 611-0011 Japan Phone. +81-774-38-3400 Fax. +81-774-38-3411 E-mail: office@iae.kyoto-u.ac.jp http://www.iae.kyoto-u.ac.jp

〒611-0011 京都府宇治市五ケ庄 TEL 0774-38-3400 FAX 0774-38-3411