Table of Contents

PREFACE1		
HIGH	LIG	aHTS
		als Science
I. IVICI		Structure of Superconducting Ca-Intercalated Bilayer Graphene on SiC Studied using Total-Reflection
		High-Energy Positron Diffraction (TRHEPD)
	1-2	"Orbital Elastic Effect" in Ni/Cu Multilayers on Ferroelectric BaTiO ₃ Studied by Electric-Field-Induced XMCD
	1-3	Graphene/Half-Metallic Heusler Alloy: A Novel Heterostructure towards High-Performance Graphene Spintronic Devices
	1-4	X-Ray Diffraction Study on High-Temperature Colossal Magnetoresistance in Single-Crystal $NdBaMn_2O_6$
	1-5	Multiple Auger-Electron Emissions from Core-Excited States in N ₂
	1-6	Interfacial Ferromagnetism of LaNiO ₃ /LaMnO ₃ Heterostructures Induced by Asymmetric Charge Redistribution
	1-7	An Effective Model for the One-Dimensional Extended Hubbard Model Applicable to Linear Optical Spectrum Calculations in Large Systems: A New Approach Based on Many-Body Wannier Functions
	1-8	Microstructural Deformation Process of Shock-Compressed Polycrystalline Aluminum
	1-9	Magnetic Skyrmion Lattice in Gd-Based Centrosymmetric Magnets
	1-10	How do Materials Fracture? - <i>In Situ</i> and Non-Destructive Observation of Crack Initiation and Propagation in Carbon-Fiber Reinforced Plastic (CFRP) -
	1-11	Sub-Molecular Structural Relaxation at a Physisorbed van der Waals Interface with Monolayer Organ Single-Crystal Semiconductors Revealed by X-Ray Reflectivity Measurements
	1-12	Realization of Non-Polar Wurtzite AIN Films by Fe Substitution and Elimination
	1-13	Topological Order of the Kondo Insulator SmB ₆ Unveiled from a New Crystal Orientation
2. Ch	emi	cal Science 28
	2-1	X-Ray Analysis of a DNA Encapsulated Silver Nanocluster with Near-IR Emission
	2-2	One-Shot Preparation of Topologically Chimeric Supramolecular Copolymers with Segregated Secondary Structures
	2-3	An Ionically Crosslinked PDMS Elastomer that Quickly Self-Heals Damage with the Aid of CO ₂ Gas
	2-4	Photoinduced Reduction Mechanism of Graphene Oxide Revealed by Ultrafast Structural Dynamics
3. Ear	th S	Science
		High-Temperature Structural Change of Sillimanite and its Phase Relation with Mullite
	3-2	Local Structures of Ti in Natural Silicate Glasses by XAFS Measurements
	3-3	Structural Study on a New Mineral, Hitachiite, Pb _E Bi ₂ Te ₂ S _E

4. Life	Science4
4	-1 Structural Analysis of Fungal <i>Endo</i> -β-1,2-Glucanase Reveals a Non-Canonical Reaction Mechanism
2	-2 Relationship between Muscular Dystrophy and Sugar Chains Containing Ribitol Phosphate Newly Found in Mammals
4	-3 Reaction Mechanism for Formation of the Tear-Inducing Chemical Compound from Onion
2	4 X-Ray Structure of the tRNA Methyltransferase Complex of Trm7 and Trm734 from Saccharomyces cerevisiae
2	Fragment-Based Discovery of the First Non-Peptidyl Inhibitor for Dipeptidyl Aminopeptidase with Chymotrypsin-Like Domain from Pathogens
4	-6 Structural Insights into a Novel Pathogenic Pathway of Schizophrenia under Carbonyl Stress
2	-7 Micro-Slit X-Ray Irradiation Reveals Testicular Tissue-Sparing Effects: An Attempt at High-Precision Radiotherapy for Male Fertility Preservation
5. Inst	rumentation and Techniques5
	Element-Specific Coherent Soft X-Ray Diffraction Imaging Study of the Skyrmion-Hosting Compound Co ₈ Zn ₈ Mn ₄
5	2 Development of a Light Source Based on a 100-mm-Long Monolithic Undulator Magnet with a Very
	Short 4-mm Period Length
5	i-3 Three-Dimensional Arrangement of Lactiferous Ducts in the Human Nipple Visualized by X-Ray Dark-Field Computed Tomography
6. Acc	elerator
6	i-1 Beam Test of a Newly-Developed Ceramics Chamber with Integrated Pulsed Magnet for an Accelerate Implementation
OPER	ATION AND PROPOSALS
1. Outl	ine of the Accelerators
2. Ope	ration Summary6
	erimental Stations 7
4. Sum	mary of User Proposals 7
APPE	NDICES
Site	and Organization

Publication List is available on the PF's website (https://www2.kek.jp/imss/pf/science/publ/pfhl/2019/).