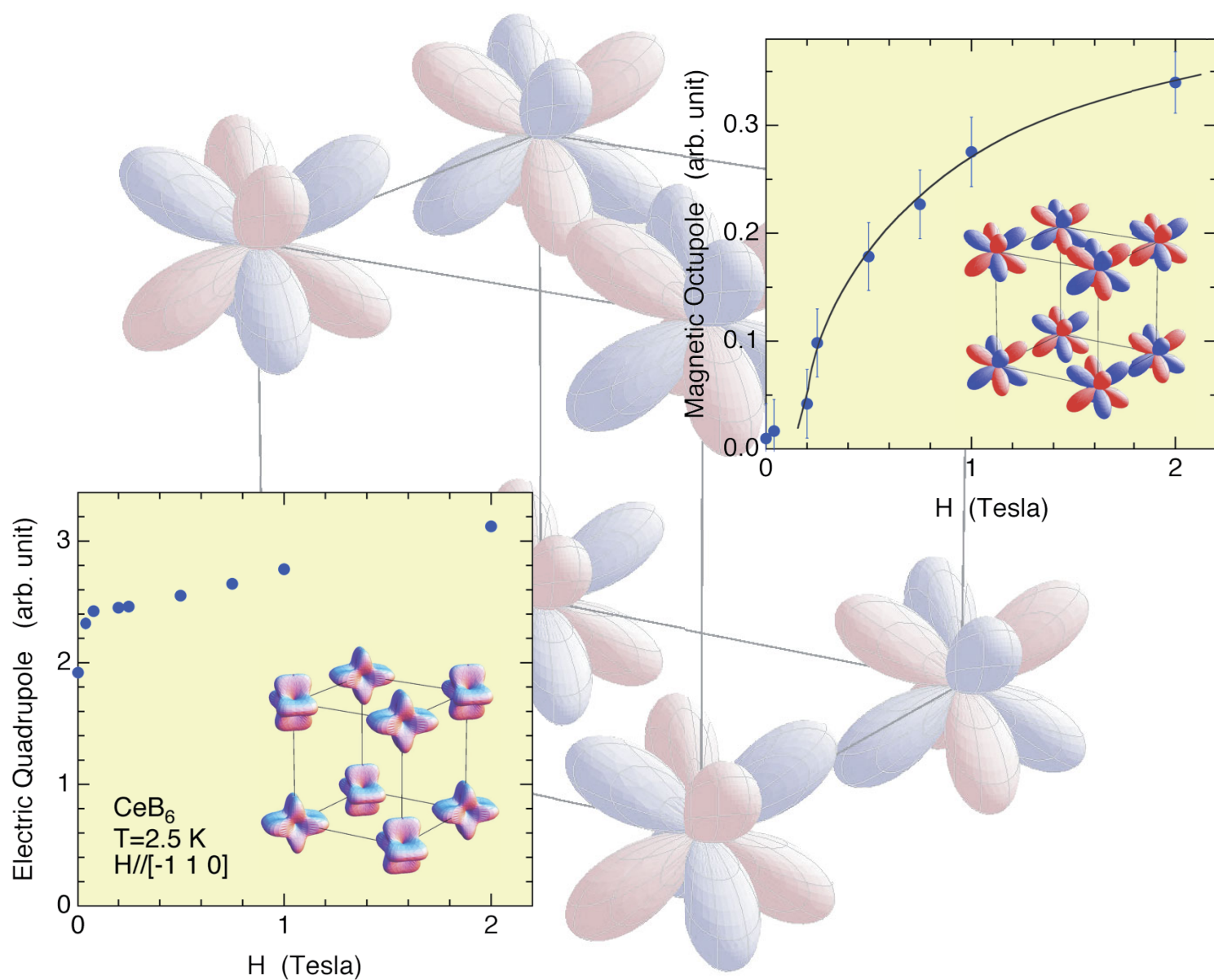


Highlights



HIGHLIGHTS

1. Atomic and Molecular Science	10
1-1 Emergence and Change of the Entanglement in the Pair of H(2p) Atoms Produced in the Photodissociation of an H ₂ Molecule	
1-2 Probing the Mechanism of Simultaneous Two-Electron Emission from Atoms	
1-3 3-D Mapping of Photoemission from a Single Oriented H ₂ O Molecule	
2. Materials Science	16
2-1 Observation of Field Induced Magnetic Octupole in CeB ₆	
2-2 Near-Surface Structure Analysis of Organic Semiconductor Rubrene Single Crystal	
2-3 Growth-Orientation Dependent Charge- and Orbital-Ordering in Epitaxially-Grown Thin Films of Pr _{0.5} Ca _{0.5} MnO ₃	
2-4 Elucidation of the Molecular Structures of Novel Metallofullerene Derivatives	
2-5 Dimensional-Crossover-Driven Metal-Insulator Transition in SrVO ₃ Ultrathin Films Studied by <i>in situ</i> Photoemission Spectroscopy	
2-6 Metallization of ZnO(10 $\bar{1}$ 0) Surface Induced by Adsorption of Hydrogen, Methanol and Water	
2-7 A Soft X-Ray Magnetic Circular Dichroism Study of Co ₂ MnGe/MgO Interfaces	
3. Chemical and Environmental Science	30
3-1 Self-Assembly Behavior in Artificial 36- and 72- Component Systems	
3-2 Correlation between Catalytic Activity and Electronic Structure of PVP Stabilized Au Clusters Probed by XAFS	
3-3 Detection of S(IV) Species in Aerosol Particles Using XANES Spectroscopy	
3-4 Spontaneous Blebbing of Oil Droplet Caused by Generation /Annihilation of the Lamellar Structure	
3-5 <i>In situ</i> and Time-Resolved Observation of RedOx Reactions of Pd/Sr-Fe-O Catalysts for Automotive Emissions	
3-6 Micro-XAFS Analysis of Micro Histological Specimen and Its Application for Pathological Diagnosis	
3-7 Ultrafast Photo-Switching of Molecular Magnet Revealed by 100-Picosecond Time Resolved XAFS	

4. Earth Science	44
4-1 High-Pressure Transformation of SiO ₂ Glass	
4-2 Discovery of New High-Pressure Phase of MgCO ₃	
4-3 High-Pressure Study of Iron Sulfide	
5. Life Science	50
5-1 Machinery for Activating the Drought-Tolerance Response in Plants	
5-2 Structure of Protochlorophyllide Reductase Reveals a Mechanism for Greening of Plants in the Dark	
5-3 Structural Basis for FTO Substrate Selection	
5-4 Structural Basis for the Inactivation of Stress Sensor Keap1 by Selective Autophagy Substrate p62	
5-5 X-Ray Analysis of a New Potent Anti-HIV Drug Actinohivin Overcoming Multi-Drug Resistance	
5-6 Structural Basis for Site-Specific Nucleosome Disassembly by Histone Chaperone CIA/ASF1 Complexed with a Double Bromodomain	
5-7 Molecular Mechanism of the Interaction of CERT Protein with Lipid Membrane	
5-8 Combined High-Resolution Neutron and X-Ray Analysis of Inhibited Elastase Confirms the Active-Site Oxyanion Hole but Rules Out a Low-Barrier Hydrogen Bond	
5-9 Microbeam Studies of Radiation-Induced Bystander Cell Killing Using Synchrotron Radiation	
6. Imaging	68
6-1 Quantitative Comparison of Imaging Performance of X-Ray Interferometric Imaging and Diffraction Enhanced Imaging	
7. Accelerators	70
7-1 First Direct Observation of the Dust-Trapping Phenomenon	
7-2 Development of a 500-kV Electron Gun for ERL	