

**Activity Report of  
Solid State Physics Section,  
Synchrotron Radiation Science Division I  
KEK IMSS  
(2014–2020)**

**And Report by Science Advisory Committee**

# Table of Contents

1	Executive summary	2
2	Introduction	5
	2.1 KEK and Institute of Materials and Structure Science (IMSS)	6
	2.2 Solid State Physics Section	8
3	Research Projects and Topics	10
	3.1 Element Strategy Initiative for Electronic Materials	11
	3.2 Inorganic Materials Structure Project	17
	3.3 Resonant X-ray Scattering Study for Condensed Matter Science	20
	3.4 Structural Investigations of Molecular Systems	26
	3.5 Study of Photoinduced Phase Transitions	31
	3.6 Theoretical Study of Permanent Magnets	35
	3.7 <i>Operando</i> Observation of Chemical and Magnetic States at Interface of Functional Thin Films	37
Appendix		
	• Publication List	45