

# Preface

## Ryosuke Kadono, Head of CMRC

We are pleased to publish the 2018 Annual Report for the Condensed Matter Research Center (CMRC). This volume discusses the progress made in five bottom-up research projects and two contracted projects, during the fiscal year. The bottom-up projects were initiated in 2015, and in the past three years, have resulted in a wealth of impressive harvests obtained via multiprobe techniques in the relevant research areas. The report highlights the research results for a variety of fields, including multiferroic manganese compounds, single-bilayer molecules, heterostructured vanadium oxides, cuprate superconductors, and shock-wave compression.

The two ongoing contracted research projects, conducted as part of the “Element Strategy Initiative: To Form Core Research Centers,” approached their final stage in 2018. The projects focus on material analyses using multiprobes, with the target to develop materials for practical use – electrified in case of the Electron Materials project and rare earth/transition metal systems in the Magnetic Materials project). Both the projects are expected to prove the power of multiprobe technique in coping with the imposed challenge on quantum beams.

Finally, I would like to appreciate all project leaders for contributing to this report and express my gratitude to Ms. Y. Koito for her editorial work.

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