

# Preface

## Ryosuke Kadono, Head of CMRC

We are pleased to deliver the Annual Report 2019 of the Condensed Matter Research Center (CMRC). Toward the end of this term, the long-standing plan to reorganize CMRC into the Center for Integrative Quantum Beam Science (CIQuS) was officially approved, which duly means that all bottom-up projects were encouraged to wrap up their work for entering the next stage. This also means that this volume will be the last of the reports issued since 2009. You may find yearly highlights with some hints for conclusions and/or perspectives in a variety of fields including multiferroic manganese compounds, single-bilayer molecules, heterostructured vanadium oxides, and cuprate superconductors.

The two ongoing contracted research projects, conducted as a part of the Element Strategy Initiative to Form Core Research Centers, were in the seventh year of a ten-year term. They continued to serve as hubs for material analyses using multiprobes, focusing on a research target to develop materials including electriles (Electron Material project) and new AI-based data acquisition/analysis systems (Magnetic Materials project). It is believed that these projects will continue proving the power of a multiprobe technique in coping with the challenges imposed on quantum beams, and that they will be completed under CIQuS.

Finally, I would like to thank all project leaders for contributing to this REPORT, and express my gratitude to Ms. Y. Koito for her editorial efforts.

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