## KASOKUKI

Journal of Particle Accelerator Society of Japan, Vol.16, No.4, 2019

## **CONTENTS**

Preface	Shinji MITSUNOBU	237
Special Issue "Accelerator and Superconducting Technology"  Introduction to Special Issue "Accelerator and Superconducting Technology"	" Shigeru KASHIWAGI	239
Introduction Introduction to Superconductivity in Accelerator	Toru OGITSU and Takaaki FURUYA	240
Accelerators and Superconducting Technologies Progress of Superconducting RF Applications in Japan Superconducting Magnets for Beam Manipulation Refrigerator Technology for Cooling RF Cavities and Magnets	Takaaki FURUYA Toru OGITSU Hirotaka NAKAI and Yasuhiro MAKIDA	251 260 271
Frontier of Superconducting Materials  History of Development of Niobium for Superconducting Cavities and the In  History and Future Prospect of Practical Superconducting Material Development	•	278 287
Expansion of Superconducting Technologies in Accelerators Advances in Superconducting Detector Solenoid Magnets and the Future Pro Superconducting Solenoid Magnets for Muon Source Superconducting Cyclotron Superconducting Technology Application of Synchrotron Light Source Acce	Makoto YOSHIDA Hiroki OKUNO	295 303 310 320
Meeting Reports Report on the 2019 North American Particle Accelerator Conference (NAPAC Reports on the 8th International Beam Instrumentation Conference (IBIC 201		329 332
Notice Board & PASJ Announcements		336

Editorial Committee Shigeru KASHIWAGI chairperson

Masatoshi ITOH, Yuji OTAKE, Takashi OBINA, Masayuki KASE, Keigo KAWASE, Michikazu KINSHO, Masao KURIKI, Tetsuo SHIDARA, Miho SHIMADA, Yusuke SUETSUGU, Fujio NAITO, Koichi NAKAYAMA, Masahito HOSAKA, Kai MASUDA, Atsushi MIYAMOTO, Tetsuhiko YORITA, Takashi WAKUI

The Journal is published quarterly by Particle Accelerator Society of Japan, Ryoichi HAJIMA, President. c/o Secretariat, Academy Center, 358–5 Yamabuki-cho, Shinjuku-ku, Tokyo 162–0801, Japan