

Research and application of the superconducting electronics

Professor Shigetoshi Ohshima

Film preparation and analysis



Photos of film preparation and film characterization systems

Design and fabrication of HTS film

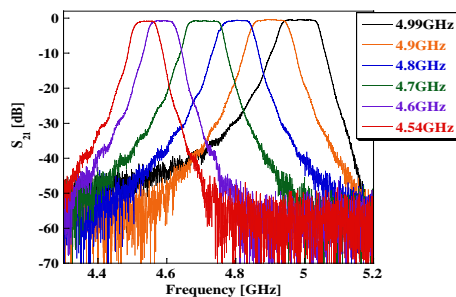


Photos of HTS filter fabrication system and HTS filter

Photos of HTS tuning system, and result of HTS filter



Automatically tuning system



Center frequency shift of HTS filter

Contents :

Our study aim is a fundamental research and application of the superconducting electronics; fabrication of high quality superconducting films (laser deposition, sputtering and MOD methods), evaluation of HTS thin films (orientation of crystal grains and surface morphology), design and fabrication of microwave HTS devices. (filter, antenna and NMR probe) Especially, we are making efforts to the development of the transmitting and receiving filter systems for the base station of the cellular phone now. The transmitting filter of the electric power-proof 10W or more is developed by using the resonator shape that we are originally proposing. In addition, it works on the development of the superconducting NMR probe. We are concentrating on the practical use of the superconducting electronics.

Yamagata University Graduate School of Science and Engineering
Research Interest : Superconducting Electronics

E-mail : ohshima@yz.yamagata-u.ac.jp

Tel : +81-238-26-3286

Fax : +81-238-26-3293

HP : <http://www.ohshima-lab.yz.yamagata-u.ac.jp>

