

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

A high T_c superconducting terahertz emitter operated from 0.5 to 2.4 THz .¹ T. KASHIWAGI, K. SAKAMOTO, H. KUBO, Y. SHIBANO, T. ENOMOTO, T. KITAMURA, K. ASANUMA, T. YASUI, C. WATANABE, K. NAKADE, Y. SAIWAI, T. KATSURAGAWA, T. TANAKA, T. YUASA, Univ. of .Tsukuba, M. TSUJIMOTO, Kyoto Univ., R. YOSHIZAKI, Univ. of .Tsukuba, T. YAMAMOTO, Ulm Univ., H. MINAMI, Univ. of .Tsukuba, R.A. KLEMM, Univ. of Central Florida, K. KADOWAKI, Univ. of .Tsukuba — According to our previous studies, the efficiency of the THz radiation from a high T_c superconducting emitter can be improved greatly when the stand-alone mesa structure of Bi2212 single crystal is used for the emitter¹). The principal reason for that lies in the heat removal from the mesa. Recently, we developed a new device structure with high heat exhaust from the stand-alone mesa structures and studied the radiation characteristics from the different shape of mesa structures. The results obtained from a cylindrical stand alone mesa show very wide the radiation frequencies ranging from 0.5 to 2.4 THz. Strong emission power peaks were observed at about 1.0 THz and 1.6 THz²). 1) T. Kitamura *et al.*, Appl. Phys. Lett. **105**, 202603 (2014) 2) T. Kashiwagi *et al.*, Appl. Phys. Lett. **107**, 082601 (2015)

¹T. K. is supported by Futaba Electronics Memorial Foundation and JSPS KAKENHI Grant No. 15K20897. This work is in part performed in collaboration with Dr. Wai Kwok and his group in Argonne National Lab.

Takanari Kashiwagi
Univ. of .Tsukuba

Date submitted: 04 Nov 2015

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