Abstract Submitted
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Improved heat exhaust and the characteristics of the high T_c superconducting terahertz emitter[1] T. KASHIWAGI, University of Tsukuba, T. YAMAMOTO, National Institute for Materials Science, T. KITAMURA, K. ASANUMA, T. YASUI, Y. SHIBANO, C. WATANABE, K. NAKADE, Y. SAIWAI, H. KUBO, K. SAKAMOTO, T. KATSURAGAWA, University of Tsukuba, M. TSUJIMOTO, Kyoto University, R. YOSHIZAKI, University of Tsukuba, H. MINAMI, Kyoto University, R.A. KLEMM, University of Central Florida, K. KADOWAKI, University of Tsukuba — In our previous study it is known that THz emitting efficiency improves greatly when the stand-alone type of mesa structure is used for the THz emitting device.[2] The principle reason for that lies in the heat removal from the mesa, in which a gigantic amount of heat is generated while the mesa is in the resistive state. Recently, we developed a new device structure based on the stand-alone type of mesa structure of Bi2212 single crystal in order to make high exhaust of Joule heating. The results show that although the power is comparable and is not significantly increased, very wide the radiation frequencies ranging from 0.3 to 1.6 THz were obtained. We will discuss the details of the radiation characteristics of this one.

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[2]K. Kadowaki *et al.,* Physica C **491**, (2013) 2

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