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The Editors Journal of Visualized Experiments 1 Alewife Center #200 Cambridge, MA 02140 Phone: 617-945-9051

Re: Submitted Manuscript

Dear Sir or Madam,

Dr Timothy M. Benseman Postdoctoral Researcher

Materials Science Divsion
Argonne National Laboratory
9700 South Cass Avenue, Bldg. 223
Argonne, IL 60439

1-630-252-6219 phone 1-630-252-4748 fax 1-630-246-1112 mobile tbenseman@anl.gov

USA

On behalf of myself and my co-authors, I would like to submit the accompanying manuscript, entitled "High-resolution thermal micro-imaging using Europium chelate fluorescent coatings" for publication in the Journal of Visualized Experiments.

It describes a technique by which self-heating of microelectronic devices can be directly and quantitatively imaged, using only comparatively simple optical microscopy equipment. We therefore feel that it will be of strong interest to the scientific community, and that JoVE's video format would be ideal for conveying how to implement this technique in practice, and correctly dealing with some of the subtleties involved. We would like to thank Jessica Haggett and Molly Cummings at JoVE for their help with submitting this manuscript.

Author contributions to this work were as follows:

Timothy Benseman & Ulrich Welp: Fabrication & testing of microdevices studied to demonstrate this technique.

Vitalii Vlasko-Vlasov & Wai-Kwong Kwok: Setup of thermal imaging microscope system.

Alexei Koshelev: Theoretical support.

Yang Hao & Courtney Keiser: Collection of thermal image data.

Ralu Divan: Microlithography support.

Chiharu Watanabe & Kazuo Kadowaki: Growth of single Bi₂Sr₂CaCu₂O₈ crystal from which the studied device was constructed.

The following professors would find this manuscript of high interest to review:

Tom Johansen (University of Oslo, t.h.johansen@fys.uio.no), Reinhold Kleiner (University of Tübingen, kleiner@uni-tuebingen.de), Paul Warburton (University College London, p.warburton@ucl.ac.uk), Huabing Wang (National Institute for Materials Science, Japan, WANG.Huabing@nims.go.jp), and Lutfi Ozyuzer (Izmir Institute of Technology, Turkey, ozyuzer@iyte.edu.tr).

Yours Sincerely,

Dr T. M. Benseman

Materials Science Division, Argonne National Laboratory