

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASML NETHERLANDS B.V., EXCELITAS TECHNOLOGIES CORP., AND
QIOPTIQ PHOTONICS GMBH & CO. KG,
Petitioners

v.

ENERGETIQ TECHNOLOGY, INC.,
Patent Owner

Cases IPR2015-01300 and
IPR2015-01303
U.S. Patent No. 7,435,982

DECLARATION OF PHILIP H. BUCKSBAUM, PH.D.

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I, Philip H. Bucksbaum, Ph.D., hereby declare as follows:

I. INTRODUCTION

1. My name is Philip H. Bucksbaum.

2. I understand that in response to a Petition submitted by ASML Netherlands B.V., Excelitas Technologies Corp., and Qioptiq Photonics GmbH & Co. KG (collectively, “Petitioners”), the Patent Trial and Appeal Board (“Board”) instituted an *inter partes* review in consolidated IPR2015-01300 and IPR2015-01303 (“IPR ’1300”) as to claims 1, 3, 4, 10, 16, 21, 24, 25, 26, 27, 30, 31, 34, 37, 42, 43, 49, 55, 61, 62, 63, 64, 67, 68, 71, 72, 74, and 78, and IPR2015-01377 (“IPR ’1377”) as to claims 23 and 60, of U.S. Patent No. 7,435,982 (the “’982 Patent”). I understand that the ’982 Patent is titled “Laser-Driven Light Source” by Donald K. Smith and that the ’982 Patent is currently assigned to Energetiq Technology, Inc. of Woburn, MA (“Energetiq”).

3. I also understand that in response to a Petition submitted by ASML Netherlands B.V., Excelitas Technologies Corp., and Qioptiq Photonics GmbH & Co. KG (collectively, “Petitioners”), the Patent Trial and Appeal Board (“Board”) instituted an *inter partes* review, IPR2015-01279 (“IPR ’1279”) as to claims 19, 39, 40, and 41 of U.S. Patent No. 7,786,455 (the “’455 Patent”). I understand that the ’455 Patent is titled “Laser-Driven Light Source” by Donald K. Smith and that the ’455 Patent is currently assigned to Energetiq Technology, Inc. of Woburn,

MA (“Energetiq”).

4. I have been retained on behalf of Energetiq as an independent expert in this *inter partes* review proceeding to provide expert opinions on the technology at issue. Specifically, I have been asked to provide my expert opinion relating to the patentability of claims 1, 3, 4, 10, 16, 21, 23, 24, 25, 26, 27, 30, 31, 34, 37, 42, 43, 49, 55, 60, 61, 62, 63, 64, 67, 68, 71, 72, and 78 of the '982 Patent and the patentability of claims 19, 39, 40, and 41 of the '455 Patent relative to the instituted grounds. Unless specifically stated, my opinions herein apply to the claimed technology in both the '982 Patent and the '455 Patent.

5. I understand that Petitioners have submitted expert Declarations by Dr. J. Gary Eden (“Declaration”) in support of their Petitions to assert that the claims at issue are invalid.

6. I confirm to the best of my knowledge the exhibits cited in this declaration are true and accurate copies of what they purport to be, and that an artisan in the field would reasonably rely on them to formulate opinions such as those set forth in this declaration.

7. For my time consulting on this matter, I am being compensated at my customary consulting rate. I am also being reimbursed for reasonable expenses incurred for my work on this matter. My compensation does not depend on the conclusions I reach in this declaration nor does it depend on the outcome of this

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