Regulatory Policy Division
Bureau of Industry and Security
U.S. Department of Commerce
14th Street and Pennsylvania Ave., N.W.
Room 2099B
Washington, D.C. 20230

Subject: Revisions to Definitions in the Export Administration Regulations

To Whom It May Concern:

SPIE, the international society for optics and photonics, and The Optical Society (OSA) appreciate the opportunity to comment on the proposed changes to the EAR.

SPIE and OSA have some concerns regarding the definition of Fundamental Research as proposed, as follows:

> (c) *Fundamental research definition.*"Fundamental research" means basic or applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community. This is distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

In order to fully encompass the research community, we recommend that the reference to "science and engineering," in the first sentence be changed to "science or engineering".

We also recommend that the language stating "published and shared broadly within the scientific community" in the first sentence be changed to "published and shared broadly within the research community."

Furthermore, the EAR proposed changes include definitions of "basic research" (734.8, EAR 772.1) and "applied research" (based on DFARS; the ITAR (120.49)).

> (1) *Basic research* means experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.
>
> 2) "Applied research" means the effort that:
> (i) Normally follows basic research, but may not be severable from the related basic research;
> (ii) Attempts to determine and exploit the potential of scientific discoveries or improvements in technology, materials, processes, methods, devices, or techniques; and
> (iii) Attempts to advance the state of the art.

These definitions create issues for certain basic and applied research, such as validation research and requiring that applied research be tied to basic research. As an alternative, we recommend using the National Science Foundation definitions, as follows:

- Basic research: systematic study to gain knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind;
- Applied research: systematic study to gain knowledge or understanding necessary for determining the means by which a recognized and specific need may be met;

Thank you for your consideration of these concerns. Please contact us for any additional information.

Sincerely,

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CEO
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The Optical Society

SPIE is the largest international not-for-profit society in optics, photonics and imaging. Together with our 18,000 individual members and 600 corporate members, the Society seeks to build a better world with light through scientific education and innovation.

Founded in 1916, OSA is home to accomplished science, engineering, and business leaders from all over the world. Through world-renowned publications, meetings, and membership programs, OSA provides quality information and inspiring interactions that power achievements in the science of light. OSA represents over 19,000 individual members and 265 businesses. OSA's mission is to promote the generation, application and archiving of knowledge in optics and photonics and to disseminate this knowledge worldwide.