



December 1, 2020

The Honorable Richard Shelby
Chairman
Senate Committee on Appropriations
S-128, The Capitol
Washington, D.C. 20510

The Honorable Patrick Leahy
Ranking Member
Senate Committee on Appropriations
437 Russell Senate Office Building
Washington, D.C. 20510

The Honorable Nita Lowey
Chairwoman
House Committee on Appropriations
H-307, The Capitol
Washington, D.C. 20515

The Honorable Kay Granger
Ranking Member
House Committee on Appropriations
1036 Longworth House Office Building
Washington, D.C. 20515

Dear Chairman Shelby, Chairwoman Lowey, Ranking Member Leahy, and Ranking Member Granger,

On behalf of the scientific societies, companies and universities listed below, we are writing to thank you for putting forward legislation with significant federal investments in Quantum Information Science (QIS) research and development (R&D). We now urge you to work together with your colleagues and the administration to ensure these resources are included in the final spending agreement for Fiscal Year 2021 spending legislation, whatever form that may take. Specifically, we believe the Senate funding levels for QIS at the Department of Energy (DOE) and National Science Foundation (NSF) represent the best outcome for this critical area. For the National Institute of Standards and Technology (NIST), we support the House number of \$48 million for QIS in FY21. Making these investments now will ensure our workforce and education system, research, and economy are poised for long term success in QIS science and technology.

Expanded federal support will be used to continue the implementation of the National Quantum Initiative (NQI) Act which was approved with overwhelming bipartisan support and signed into law by President Trump in December 2018. This legislation established a coordination framework for government agencies to expand QIS R&D, which is critical to both our economic and national security. Research projects under the NQI Act are already beginning across the country. It is now imperative that lawmakers work together to ensure this framework and the National Quantum Centers it supports have the necessary resources for long term planning and research.

Scientists and researchers at these Centers will conduct basic and applied research, accelerate scientific breakthroughs, and train the workforce needed to capitalize on these scientific breakthroughs. Additional federal funds will help engineer, industrialize, and automate quantum technology, including quantum computers, communications/networking systems, and sensors. With continued and substantial federal support, these efforts will ensure this technology can be used in both the public and private sectors well into the future.

It is well established that quantum research holds tremendous potential across many sectors: infrastructure management, cybersecurity, medical research and treatment, advanced communications, financial services, energy, and transportation. With continued support, these advancements will come sooner rather than later. Other countries are also making significant investments in quantum (\$10 billion in China and \$1.3 billion in the European Union) and the U.S. must keep pace.



Your commitment to funding QIS R&D will ensure that we maintain our role as a global leader in this critical field. It will also help bridge significant workforce gaps between leading quantum researchers and industrial product developers. This will help accelerate the process of moving quantum research from the laboratory to the marketplace.

Once again, we applaud your commitment to funding these exciting efforts and thank you for your work in advancing this important research and technology.

Sincerely,

American Physical Society
AOSense, Inc.
Atom Computing
Carnegie Mellon University
Center for Quantum Information and Control, University of New Mexico
Coherent
Duke University
equal1.labs Inc.
George Mason University
Google
Great Lakes Crystal Technologies
Harvard University
Honeywell
IBM
Intel Corporation
IonQ
L3Harris Technologies
Microsoft
Montana Instruments
NY CREATES
OEwaves, Inc.
OSA, The Optical Society
Pittsburgh Quantum Institute
Purdue University
Qrypt
Quantum Circuits, Inc.
Quantum Thought, Inc.
Qubitekk
QuSecure, Inc.
Rigetti
Rochester Institute of Technology
Speqtral Quantum Technologies, Inc. (SQT)
SPIE, the international society for optics and photonics
The State University of New York
TOPTICA Photonics, Inc.
University of Arizona



University of California System
University of Chicago
University of Colorado Boulder
University of Oregon
University of Rochester
University of Southern California
Vapor Cell Technologies
Yale University