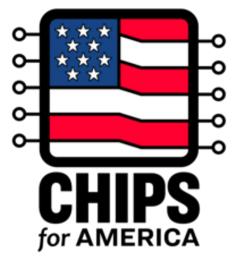


News from the NPI

September 22, 2022

CHIPS and Science Act is Now Law

Following Congressional approval in late July, President Biden signed the bipartisan CHIPS and Science Act (CHIPS Act) into law. Now the Biden administration is working to implement the legislation, which has been a priority for the NPI throughout this year. The CHIPS Act provides \$52 billion focused on establishing investments and incentives to support U.S. semiconductor manufacturing, research and development, supply chain security and workforce development. The science portions of the bill include authorization for increased funding levels for several key science agencies,



direction to the Department of Commerce to establish 20 "regional technology hubs" and the establishment of a high-intensity laser research initiative.

Optics and photonics is an important enabler for the semiconductor industry and as such, CHIPS Act funding provides numerous opportunities for optics and photonics companies. Consequently, the NPI made the CHIPS Act a key focus of meetings with lawmakers and staff during virtual Congressional meetings earlier this year and communicated directly with House and Senate leaders to advocate for the legislation. The NPI will continue to engage with the Biden administration as the CHIPS Act is implemented. A key part of this effort will be the CHIPS for America program, which will be housed within the National Institute of Standards and Technology (NIST). The program aims to revitalize the domestic semiconductor industry and spur innovation in this critical industry. According to NIST, funding documents, which will provide specific application guidance for the CHIPS for America program, will be released by early February 2023. For more on the implementation strategy for the CHIPS and Science Act, please visit chips.gov.

DOE Announces Investment in Bioenergy Technology, Quantum Imaging

The Department of Energy recently announced a significant investment in bioenergy technology with an emphasis on quantum-enabled bioimaging and

sensing. A statement from the Department read in part: "The U.S. Department of Energy (DOE) today announced \$178 million for bioenergy research to advance sustainable technology breakthroughs that can improve public health, help address climate change, improve food and agricultural production, and create more resilient supply chains. This funding will support cutting-edge biotechnology R&D of bioenergy crops, industrial microorganisms, and microbiomes. Alternative clean energy sources like bioenergy are playing a key role in reaching President Biden's goal of a net-zero carbon economy by 2050." The announcement also included an \$18 million investment in quantum-enabled bioimaging and sensing for bioenergy to develop state-of-the-art instruments and biological sensors that will advance research on plant and microbial systems relevant to bioenergy and environmental research. Read the full statement HERE. More information on the Department's Biological and Environmental Research (BER) program can be found HERE.

Government Funding Delayed

As the current fiscal year expires, Congress has not finalized spending bills. Instead, Congress will likely approve a continuing resolution to ensure the government stays funded through mid-December. Earlier this summer, the House of Representatives Appropriations Committee approved spending bills but the Senate has not considered any spending measures. The House Appropriations Committee-approved measures include significant investments in key quantumrelated initiatives including:

- Not less than \$255 million for the Department of Energy's Office of Science quantum information science (QIS) efforts, including not less than \$120 million for research and \$125 million for the five National Quantum Information Science Research Centers.
- Up to \$61 million for the National Institute of Standards and Technology's QIS research activities, which is \$12 million above the amount enacted last year.
- \$211 million for QIS activities at the National Science Foundation and \$50 million for National Quantum Information Science Research Centers.

The measure also recommends not less than \$32 million for High-Energy-Density Laboratory Plasmas "to advance cutting-edge research in extreme States of matter, support and expand the capabilities of the LaserNetUS facilities, and continue investments in new intense, ultrafast laser technologies and facilities needed to implement the recommendations of the Brightest Light Initiative Workshop Report in order to retain U.S. leadership in these fields." The NPI has been actively engaged in supporting the Brightest Light Initiative through community engagement and collaboration. As negotiations continue on these measures, the NPI will remain engaged and advocate for these critical resources.

MESSAGE FROM THE CHAIRMAN

Thank you for all you do for NPI and special thanks to the members of the optics and photonics community who used their voice to advocate for the critical CHIPS and Science Act during the NPI's virtual Congressional meetings!



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