DEPARTMENT OF COMMERCE

International Trade Administration

Massachusetts Institute of Technology, et al.; Notice of Decision on Application for Duty-Free Entry of Scientific Instruments

This is a decision pursuant to section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Pub. L. 89–651, as amended by Pub. L. 106–36; 80 Stat. 897; 15 CFR part 301). On October 29, 2024, the Department of Commerce published a notice in the **Federal Register** requesting public comment on whether instruments of equivalent scientific value, for the purposes for which the instruments identified in the docket(s) below are intended to be used, are being manufactured in the United States. See ''Application(s) for Duty-Free Entry of Scientific Instruments'', 89 FR 85942–43, October 29, 2024 (Notice). We received no public comments.

Comments: None received. Decision: Approved. We know of no instrument of equivalent scientific value to the foreign instrument described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order.

Docket Number: 24–026. Applicant: Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139. Instrument: Narrow linewidth laser, FL–SF–1695–0.5.–CW. Manufacturer: Shanghai Precilaser Technology, Co., Ltd., China. Intended Use: The instrument will be used as a single frequency laser system at 1695 nm that will be used in quantum physics experiments at MIT for improved optical atomic clocks and precision measurement using ytterbium (^{171}Yb). The 1695 nm frequency is the Yb optical transition between the ground state $4f^{14}6s6p^{3}P_0$ and the metastable state $4f^{13}6s^{2}5d(J = 2)$, where J represents the total angular momentum. This transition allows the possibility of dual-mode optical lattice clocks to further reduce the uncertainty from external level shifts, as well as physics beyond the standard model (for example investigating a potential mediating particle for forces between electron and neutron).

Docket Number: 24–027. Applicant: Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02114. Instrument: Low noise laser system. Manufacturer: Shanghai Precilasers Technology Co., Ltd., China. Intended Use: The instrument is intended to be used for Sodium potassium molecules confined in optical dipole traps. Sodium potassium molecules are fermionic molecules possessing large electric dipole moment. Clouds of sodium-23 and potassium-40 atoms are first laser-cooled into suitable ultracold temperatures and loaded into optical dipole traps. A two-photon Raman process using the laser system to be imported then binds pairs of sodium-23 and potassium-40 atoms into deeply bound molecules in their absolute ground state. Direct control of quantum states of molecules is difficult owing to the structural complexity of molecules. Binding molecules from laser-cooled and well-controlled atoms provides a more feasible alternative to controlling and manipulating quantum states of molecules.

Docket Number: 24–029. Applicant: Harvard University, 1033 Massachusetts Avenue, Cambridge, MA 02138. Instrument: Narrow Line-width laser. Manufacturer: Shanghai Precilasers Technology Co., Ltd., China. Intended Use: The narrow linewidth (<2kHz), ultralow noise (intensity and phase), large tuning range (>1nm) seed laser at 1591 nm will be used as a seed to be doubled down to 795 nm. The seed laser will be used in a quantum physics experiment at Harvard for laser cooling and trapping experiments for Rubidium atoms to explore quantum physics research. The research work enabled by this system is part of the training of graduate students, undergraduate students, and postdoctoral research fellows.

Docket Number: 24–030. Applicant: University of Michigan, Naval Architecture and Marine Engineering, West Hall Rm. 126, 1085 S University Avenue, Ann Arbor, MI 48109. Instrument: Wave Generator System. Manufacturer: Van Halteren Technologies Boxtel BV, Netherlands. Intended Use: The instrument will be used to study ship motions in water waves. Ship models in fresh water are to be investigated. The experiments to be conducted will involve the creation of model scale ocean waves. The objective is an engineering understanding of wave mechanics and the response of ship metrics.

Docket Number: 24–031. Applicant: University of Chicago, 929 E 57th Street, GCIS ESB41, Chicago, IL 60637 Instrument: Fiber Laser. Manufacturer: PreciLasers, China. Intended Use: The instrument is intended to be used to study the Cold molecular Nuclear Time-Reversal Experiment (CeNTREX), a collaborative physics experiment between University of Massachusetts Amherst, Columbia University, Yale University, University of Chicago, and Argonne National Laboratory. The goal of the CeNTREX project is to shed light on the reasons for why there is more matter than antimatter in the Universe through the measurement of properties of the thallium-205 nucleus.

Docket Number: 24–032. Applicant: University of California, Santa Barbara, 2509 Broida Hall, Santa Barbara, CA 93106–9530. Instrument: Low Noise Laser Amplifier. Manufacturer: Shanghai Precilaser Technology Co., Ltd., China. Intended Use: The instrument is intended to be used in a cold atom experiment at the University of California, Santa Barbara, for optical trapping and manipulation of cold lithium-7 atoms. It will be seeded by 100 nW 1064 laser and will produce 100 W output power. The low relative intensity noise (RIN) of this laser amplifier is critical, because the intensity noise contributes a lot to the stability of the optical traps, and the atom interferometry experiment is very sensitive to the noise of the optical traps.

Docket Number: 24–033. Applicant: Harvard University, 17 Oxford Street, Jefferson 158, Cambridge, MA 02138. Instrument: High Power Single Frequency Fiber Amplifier. Manufacturer: Connet Laser Technology Co., Ltd., China. Intended Use: The high power (30 W), single frequency fiber amplifier system 1908 nm will be used in a quantum physics experiment at Harvard for optical tweezer trapping of rubidium-87 atoms. The available laser power will allow many more of these atoms (thousands) to be controlled than previously demonstrated (hundreds). This platform will allow the study of larger quantum systems with properties and fidelities far exceeding smaller systems.

Dated: March 20, 2025.

Tyler O'Daniel,

Acting Director, Subsidies and Economic Analysts, Enforcement and Compliance.

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–557–827]

Dioctyl Terephthalate From Malaysia: Final Affirmative Determination of Sales at Less Than Fair Value

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The U.S. Department of Commerce (Commerce) determines that dioctyl terephthalate (DOTP) from