Resource Summary Report

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Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility

RRID:SCR_018674
Type: Tool

Proper Citation

Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility (RRID:SCR_018674)

Resource Information

URL: https://ki.mit.edu/sbc/nanocore

Proper Citation: Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility (RRID:SCR_018674)

Description: Provides instruments for materials and nanomaterials research and full service TEM and cryoTEM sample preparation and imaging. Conducts CLEM and cryoCLEM workflows utilizing cryoFluorescence, cryoSEM and cryoFIB with focus on bio samples.Provides equipment and expertise to work with nanomaterials for characterization and imaging purpose. Core imaging capabilities include high performance field emission transmission electron microscope equipped with STEM, EELS, EDS and cryo-imaging, high performance field emission scanning electron microscope and focused ion beam equipped with STEM and cryo-imaging, cryo-fluorescent confocal microscope for CLEM workflows, and atomic force microscope equipped with liquid cell. Instrumentation for material characterization includes high throughputdynamic light scattering, nanoparticle sizing and counting, and rheometry.

Synonyms: Bio and CryoEM in the Nanotechnology Materials Core

Resource Type: access service resource, core facility, service resource

Keywords: USEDit, material research, nanomaterial, cryo imaging, cryo fluorescenct confocal microscope, cryoSEM, cryoFIB, imaging, electron microscope, atomic force microscope, light scattering, nanoparticle sizing, rheometry, ABRF, ABRF

Funding: NCI P30 CA14051

Availability: Open

Resource Name: Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility

Resource ID: SCR_018674

Alternate IDs: ABRF_767

Alternate URLs: https://coremarketplace.org/?FacilityID=767, https://ki.mit.edu/sbc/nanocore/fees

Record Creation Time: 20220129T080341+0000

Record Last Update: 20260912T200407+0000

Ratings and Alerts

No rating or validation information has been found for Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility.

No alerts have been found for Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 30 mentions in open access literature.

Listed below are recent publications. The full list is available at SPARC SAWG .

Lash B, et al. (2026) In vitro-reconstituted Drosophila Arc capsids deliver gene editors to dystrophic muscle. bioRxiv : the preprint server for biology.

Eshaghi B, et al. (2026) Am80-lipid nanoparticles serve as an enteric mucosal adjuvant following parenteral immunization with inactivated polio vaccine. Science advances, 12(23), eaea5433.

Westerfield AD, et al. (2026) A 3D In Vitro Model of the Human Hepatobiliary Junction. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 13(39), e14855.

Zhang L, et al. (2025) Degradable poly(??-amino ester) microparticles for cleansing products and food fortification. Nature chemical engineering, 2(1), 77.

Wu Y, et al. (2025) Biophysical and molecular mechanisms responsible for phytoplankton sinking in response to starvation. bioRxiv : the preprint server for biology.

Zhang L, et al. (2025) Polyanhydride-Based Microparticles for Programmable Pulsatile Release of Diphtheria Toxoid (DT) for Single-Injection Self-Boosting Vaccines. Advanced

materials (Deerfield Beach, Fla.), 37(32), e2501168.

Isaac I, et al. (2025) Reengineering Endogenous Targeting Lipid Nanoparticles (ENDO) for Systemic Delivery of mRNA to Pancreas. Advanced materials (Deerfield Beach, Fla.), e2507657.

Wu Y, et al. (2025) Diverse biophysical and molecular mechanisms drive phytoplankton sinking in response to starvation. PLoS biology, 23(11), e3003508.

Han J, et al. (2025) On-patient medical record and mRNA therapeutics using intradermal microneedles. Nature materials, 24(5), 794.

Isaac I, et al. (2025) Endogenous Corticosteroid Derived Lipid Nanoparticles (Cortico LNPs) Enable Selective mRNA Delivery to the Spleen. Small (Weinheim an der Bergstrasse, Germany), 21(36), e03034.

Wu W, et al. (2025) Plasma membrane folding enables constant surface area-to-volume ratio in growing mammalian cells. Current biology : CB, 35(7), 1601.

Tappan BA, et al. (2025) Investigation of Charge Transfer Kinetics in Multilayer PEO/LLZO Solid-State Batteries. ACS applied materials & interfaces, 17(12), 18255.

Kishimori R, et al. (2025) Impact of x rays on the sensitivity of CR-39 detectors to 2.4-MeV protons. The Review of scientific instruments, 96(7).

Bu A, et al. (2024) Actuating Extracellular Matrices Decouple the Mechanical and Biochemical Effects of Muscle Contraction on Motor Neurons. Advanced healthcare materials, e2403712.

Wu W, et al. (2024) Constant surface area-to-volume ratio during cell growth as a design principle in mammalian cells. bioRxiv : the preprint server for biology.

Alonso-Matilla R, et al. (2024) Cell-intrinsic mechanical regulation of plasma membrane accumulation at the cytokinetic furrow. Proceedings of the National Academy of Sciences of the United States of America, 121(29), e2320769121.

Kim YJ, et al. (2024) Magnetoelectric nanodiscs enable wireless transgene-free neuromodulation. Nature nanotechnology.

Tomasello DL, et al. (2024) Mitochondrial dysfunction and increased reactive oxygen species production in MECP2 mutant astrocytes and their impact on neurons. Scientific reports, 14(1), 20565.

Alsaiari SK, et al. (2024) Zeolitic imidazolate frameworks activate endosomal Toll-like receptors and potentiate immunogenicity of SARS-CoV-2 spike protein trimer. Science advances, 10(10), eadj6380.

Martin-Alonso C, et al. (2024) Priming agents transiently reduce the clearance of cell-free DNA to improve liquid biopsies. Science (New York, N.Y.), 383(6680), eadf2341.