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: core facility, service resource, access 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: 20250519T205306+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 17 mentions in open access literature.

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

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.

Hartquist CM, et al. (2024) Reversible two-way tuning of thermal conductivity in an end-linked star-shaped thermoset. Nature communications, 15(1), 5590.

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.

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.

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.

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.

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

Vander Straeten A, et al. (2024) A microneedle vaccine printer for thermostable COVID-19 mRNA vaccines. Nature biotechnology, 42(3), 510.

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

Aizik G, et al. (2024) Injectable hydrogel based on liposome self-assembly for controlled release of small hydrophilic molecules. Acta biomaterialia, 183, 101.

Kanelli M, et al. (2024) A Machine Learning-Optimized System for Pulsatile, Photo- and Chemotherapeutic Treatment Using Near-Infrared Responsive MoS2-Based Microparticles in a Breast Cancer Model. ACS nano, 18(44), 30433.

Shan X, et al. (2023) Mutation-induced infections of phage-plasmids. Nature communications, 14(1), 2049.

Lee J, et al. (2023) More than magnetic isolation: Dynabeads as strong Raman reporters towards simultaneous capture and identification of targets. ArXiv.

Wan R, et al. (2023) Dipole-Dependent Waveguiding in an Anisotropic Metal-Organic Framework. Journal of the American Chemical Society, 145(34), 19042.

Tabrizi S, et al. (2023) An intravenous DNA-binding priming agent protects cell-free DNA and improves the sensitivity of liquid biopsies. bioRxiv : the preprint server for biology.

Martin-Alonso C, et al. (2023) A nanoparticle priming agent reduces cellular uptake of cell-free DNA and enhances the sensitivity of liquid biopsies. bioRxiv : the preprint server for biology.

Kanelli M, et al. (2023) A Machine Learning-optimized system for on demand, pulsatile, photo- and chemo-therapeutic treatment using near-infrared responsive MoS 2 -based microparticles in a breast cancer model. bioRxiv : the preprint server for biology.