



Utkan Demirci

Professor of Radiology (Diagnostic Sciences Laboratory) and, by courtesy, of Electrical Engineering

Bio

BIO

Dr. Utkan Demirci, UofM'99, Stanford'01'05'05, is a Professor of Radiology (with tenure) and of Electrical Engineering (by courtesy) at the Canary Center at Stanford for Cancer Early Detection, Stanford University School of Medicine, where he leads a productive researcher group. Utkan is a tenured professor at Stanford University School of Medicine. Prior to joining Stanford in 2014, he held the position of Associate Professor at the Brigham and Women's Hospital-Harvard Medical School and also served at the Harvard-MIT Health Sciences and Technology division. Over the past decade, his research group has focused on the early detection of cancer and has made significant contributions to the development of microfluidic platforms for sorting rare cells and exosomes and point-of-care bio-sensing technologies.

Dr. Demirci leads a productive and impactful research group focused on addressing problems from the clinic with innovations including cell sorter for IVF, optical technologies for detecting viruses, portable point of care technologies for diagnostics in global health, smart robots in vivo, extracellular vesicle based early detection approaches for cancer. He is an elected fellow of the American Institute of Medical and Biological Engineering and The Academy for Radiology & Biomedical Imaging Research Distinguished Investigator.

He has published over 250 peer-reviewed articles, 300 abstracts and proceedings, 24 book chapters and editorials, and 7 edited books. He also serves on the editorial board of various journals. He is a serial academic entrepreneur and co-founded multiple successful companies. His patents are translated into broadly used biomedical products. Dr. Demirci's pioneering work in microfluidics and cell sorting has resulted in CE certified and FDA approved devices used in over 500,000 clinical cases serving patients globally.

ACADEMIC APPOINTMENTS

- Professor, Radiology
- Professor (By courtesy), Electrical Engineering
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Interim Director, Division Chief, Canary Center at Stanford for Early Cancer Detection, (2020-2024)

- Co-Director, Co-Division Chief, Canary Center at Stanford for Cancer Early Detection, (2019-2020)

HONORS AND AWARDS

- Visiting Fellow Commoner, Trinity College, University of Cambridge (2024-25)
- Certificate of Appreciation, Institute for Experimental and Clinical Traumatology, Ludwig Boltzman Institute (2018)
- Distinguished Investigator Award, Academy for Radiology and Biomedical Imaging Research (2017)
- Fellow-Elect, American Institute of Medical and Biomedical Engineers (AIMBE) (2017)
- 2nd Place Student and Investigator Section Oral Presentation, Tissue Engineering and Regenerative Medicine International Society (TERMIS)-Asia Pacific Meeting (2016)
- Basic Scientist of the Year, Department of Radiology, Stanford School of Medicine (2016)
- StarTURK Award, Assembly of Turkish American Association (2014)
- Bright Futures Award, Brigham and Women's Hospital, Brigham Research Institute (2013)
- Sharktank Competition, American Epilepsy Foundation (2013)
- Early Career Achievement Award, IEEE-EMBS (2012)
- Faculty Early Career Development Award, NSF (2012)
- Coulter Translational Research Award, Biomedical Engineering Society (BMES) (2011)
- Engineering in Medicine and Biology Research Award for Translational Research, IEEE-Wyss Institute (2011)
- Partners in Excellence Award, Partners Health Care (2011)
- Chinese Young Investigator Award, National Science Foundation of China (2010)
- The Outstanding Young Persons of the World, Junior Chamber International (JCI) (2009)
- Nano-Biotechnology Award, National Science Council of Turkey and The Turkish Industrialists' and Businessmen's Association (2007)
- TR-35 Award-MIT, MIT Technology Review (2006)
- Ministry of Education Award, Turkish Ministry of Education (2005)
- 1st Place, BASES Entrepreneur's Challenge Business Plan Competition, Stanford University (2004)
- Winner of Accenture Grand Prize, Singapore Business Plan Competition (2004)
- Outstanding Paper Award, Transactions on Ultrasonic, Ferroelectrics, and Frequency Control, IEEE (2003)
- Raymond William Barrow (RWB) Stephens Student Prize of Elsevier Science, Proceedings of Ultrasonic International (2001)
- James B. Angell Scholar, University of Michigan (1999)
- Phi Kappa Phi, National Honor Society, University of Michigan (1999)
- Scholarship for Undergraduate Education, Turkish Ministry of Education (1996)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Chair, Industry Council, American Institute for Medical and Biological Engineering (AIMBE) (2025 - present)

PROFESSIONAL EDUCATION

- Ph.D., Stanford University, Stanford, CA , Electrical Engineering (2005)
- M.S., Stanford University, Stanford, CA , Management Science and Engineering (2005)
- M.S., Stanford University, Stanford, CA , Electrical Engineering (2001)
- B.S., University of Michigan, Ann Arbor, MI , Electrical Engineering (1999)

LINKS

- "BAMM Lab Website": <https://bammlab.stanford.edu/home>

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Ugur Aygun

Doctoral Dissertation Advisor (AC)

Prima Dewi Sinawang

Postdoctoral Research Mentor

Suraj Pavagada

Publications

PUBLICATIONS

- **Selective capture and digital counting of intact HIV pseudovirus using designer DNA nets, tethered motion, and photonic resonator interferometric scattering microscopy** *APL BIOENGINEERING*
Tibbs, J., Umrao, S., Song, T., Anirudhan, V., Shepherd, S., Wolhaupter, K., Zheng, M., Wiggins, S., Rong, L., Hisey, C. L., Demirci, U., Wang, X., Cunningham, et al
2026; 10 (2): 026101
- **Analysis of Plasma Extracellular Vesicles in Normal-Weight and Overweight Type 2 Diabetes Mellitus Using Multimodal SERS and RNA-Seq.** *bioRxiv : the preprint server for biology*
Parlatan, U., Patel, A. N., Torun, H., Karim, A. H., Ozen, M. O., Palaniappan, L., Demirci, U.
2026
- **Point of care molecular cancer diagnostics.** *Lab on a chip*
Bhaskar, S., Umrao, S., Lee, H. K., Tibbs, J., Bacon, A., Shepherd, S., Ayupova, T., Ciloglu, F. U., Liu, L., Tan, A., Chen, W. C., Nguyen, M. T., Scannell, et al
2026
- **SPECTRA-based detection of drug-induced hepatotoxicity through extracellular vesicle analysis** *SENSORS AND ACTUATORS B-CHEMICAL*
Parlatan, U., Boudreau, L., Torun, H., Fan, L., Aygun, U., Gokaltun, A., Akin, D., Usta, O., Demirci, U.
2026; 455
- **DNA origami capture and tethering of intact viruses and label-free digital detection by photonic crystal enhanced scattering microscopy**
Cunningham, B. T., Tibbs, J., Umrao, S., Song, T., Shepherd, S., Xiong, Y., Zhou, L., Demirci, U., Wang, X.
edited by Shaked, N. T., Hayden, O.
SPIE-INT SOC OPTICAL ENGINEERING.2026
- **Engineering and biofabrication of early cancer models** *NATURE REVIEWS BIOENGINEERING*
Helms, H. R., Davies, A. E., Schutt, C. E., Langer, E. M., Duhon, R., Sinawang, P., Akin, D., Demirci, U., Esener, S. C., Fitzgerald, R. C., Bertassoni, L. E.
2025
- **A microneedle device for rapid dermal interstitial fluid sampling.** *Science advances*
Hung, A. H., Kamat, N. U., Bermudez, A., Boczek, S. M., Garcia-Marqués, F. J., Tan, Y. L., Hwang, J. L., Sinawang, P. D., Ilyin, D., Jacobson, G. B., Demirci, U., Poplack, S. P., Pitteri, et al
2025; 11 (39): eadx5492
- **Extracellular Vesicles in Serum Carry Trop2 Protein as a Potential Molecular Indicator in Prostate Cancer.** *Journal of extracellular biology*
Sinawang, P. D., Ozen, M. O., Liu, S., Hsu, E. C., Akin, D., Ding, E., Nolley, R., Brooks, J. D., Stoyanova, T., Demirci, U.
2025; 4 (9): e70083
- **Plasma Preparation Strategies for Extracellular Vesicle-Based Biomarkers in Metastatic Castration-Resistant Prostate Cancer.** *Journal of extracellular biology*

- Sinawang, P. D., Multani, P., Ozen, M. O., Wong, J., Akin, D., Hanson, C., Larsen, M., Ampaw, E., Rondina, M. T., Tolley, N. D., Wang, L., Cunningham, B. T., Kohli, et al
2025; 4 (8): e70071
- **Screw-Based Pill for Intelligent Robotic Extraction of Viscous Fluids in Medical Applications** *ADVANCED INTELLIGENT SYSTEMS*
Sinawang, P., Garcia-Gradilla, V., Soto, F., Akin, D., Braunreuther, M., Fuller, G. G., Demirci, U.
2025
 - **A biosensor-integrated filtration device for nanoparticle isolation and label-free imaging.** *Lab on a chip*
Liu, L., Ayupova, T., Umrao, S., Akin, L. D., Lee, H. K., Tibbs, J., Wang, X., Demirci, U., Cunningham, B. T.
2025
 - **Early detection of pancreatic cancer by a high-throughput protease-activated nanosensor assay.** *Science translational medicine*
Montoya Mira, J. L., Quentel, A., Patel, R. K., Keith, D., Sousa, M., Minnier, J., Kingston, B. R., David, L., Esener, S. C., Sears, R. C., Lopez, C. D., Sheppard, B. C., Demirci, et al
2025; 17 (785): eadq3110
 - **SHINE: SERS-based Hepatotoxicity detection using Inference from Nanoscale Extracellular vesicle content.** *bioRxiv : the preprint server for biology*
Parlatan, U., Boudreau, L., Torun, H., Fan, L., Aygun, U., Gokaltun, A. A., Akin, D., Usta, O. B., Demirci, U.
2025
 - **Dynamically reconfigurable acoustofluidic metasurface for subwavelength particle manipulation and assembly.** *Nature communications*
Surappa, S., Pavagada, S., Soto, F., Akin, D., Wei, C., Degertekin, F. L., Demirci, U.
2025; 16 (1): 494
 - **Extracellular Vesicles in Serum Carry Trop2 Protein as a Potential Molecular Indicator in Prostate Cancer** *Journal of Extracellular Biology*
Sinawang, P. D., Ozen, M. O., Liu, S., Hsu, E., Akin, D., Ding, E., Nolley, R., Brooks, J. D., Stoyanova, T., Demirci, U.
2025; 4 (9)
 - **A BIOSENSOR-INTEGRATED FILTRATION DEVICE FOR INTACT HIV ISOLATION AND LABEL-FREE DETECTION IN POINT-OF-CARE ENVIRONMENTS**
Liu, L., Ayupova, T., Umrao, S., Akin, L. D., Lee, H., Tibbs, J., Wang, X., Demirci, U., Cunningham, B. T., IEEE
IEEE.2025: 1245-1248
 - **A smart probe for detection of sugar markers for applications in gastrointestinal barrier dysfunction.** *Biosensors & bioelectronics*
Inci, F., Resendez, A., Karaaslan, M. G., Pandrala, M., Kojouri, A. M., Ahmed, R., Ogut, M. G., Singaram, B., Malhotra, S. V., Demirci, U.
2024; 272: 117040
 - **PpIX-enabled fluorescence-based detection and photodynamic priming of platinum-resistant ovarian cancer cells under fluid shear stress.** *Photochemistry and photobiology*
Ruhi, M. K., Rickard, B. P., Overchuk, M., Sinawang, P. D., Stanley, E., Mansi, M., Sierra, R. G., Hayes, B., Tan, X., Akin, D., Chen, B., Demirci, U., Rizvi, et al
2024
 - **Dynamic and large field of view photonic resonator absorption microscopy for ultrasensitive digital resolution detection of nucleic acid and protein biomarkers.** *Biosensors & bioelectronics*
Liu, W., Ayupova, T., Wang, W., Shepherd, S., Wang, X., Akin, L. D., Kohli, M., Demirci, U., Cunningham, B. T.
2024; 264: 116643
 - **Co-axial hydrogel spinning for facile biofabrication of prostate cancer-like 3D models.** *Biofabrication*
Guimaraes, C. F., Liu, S., Wang, J., Purcell, E., Ozedirme, T., Ren, T., Aslan, M., Yin, Q., Reis, R. L., Stoyanova, T., Demirci, U.
2024
 - **Integrated "lab-on-a-chip" microfluidic systems for isolation, enrichment, and analysis of cancer biomarkers.** *Lab on a chip*
Surappa, S., Multani, P., Parlatan, U., Sinawang, P. D., Kaifi, J., Akin, D., Demirci, U.
2023
 - **Systematic Analysis of Tissue-Derived and Biofluid Extracellular Vesicle miRNAs Associated with Prostate Cancer.** *Advanced biology*
Larson, J., Ozen, M. O., Kohli, M., Akin, D., Demirci, U.
2023: e2200327

- **Methods to Evaluate Changes in Mitochondrial Structure and Function in Cancer.** *Cancers*
Rickard, B. P., Overchuk, M., Chappell, V. A., Kemal Ruhi, M., Sinawang, P. D., Nguyen Hoang, T. T., Akin, D., Demirci, U., Franco, W., Fenton, S. E., Santos, J. H., Rizvi, I.
2023; 15 (9)
- **Programmable Shape Morphing Metasponge** *ADVANCED INTELLIGENT SYSTEMS*
Soto, F., Tsui, A., Surappa, S., Ahmed, R., Wang, J., Kilinc, U., Akin, D., Demirci, U.
2023
- **A photonic resonator interferometric scattering microscope for label-free detection of nanometer-scale objects with digital precision in point-of-use environments.** *Biosensors & bioelectronics*
Liu, L., Tibbs, J., Li, N., Bacon, A., Shepherd, S., Lee, H., Chauhan, N., Demirci, U., Wang, X., Cunningham, B. T.
2023; 228: 115197
- **Review of HIV Self Testing Technologies and Promising Approaches for the Next Generation.** *Biosensors*
Bacon, A., Wang, W., Lee, H., Umrao, S., Sinawang, P. D., Akin, D., Khemtonglang, K., Tan, A., Hirshfield, S., Demirci, U., Wang, X., Cunningham, B. T.
2023; 13 (2)
- **Color-selective labyrinth-like quantum dot nanobeads enable point-of-care dual assay of of Mycotoxins** *SENSORS AND ACTUATORS B-CHEMICAL*
Hu, X., Huang, L., Wang, S., Ahmed, R., Li, P., Demirci, U., Zhang, Z.
2023; 376
- **Label-Free Identification of Exosomes using Raman Spectroscopy and Machine Learning.** *Small (Weinheim an der Bergstrasse, Germany)*
Parlatan, U., Ozen, M. O., Kecoglu, I., Koyuncu, B., Torun, H., Khalafkhany, D., Loc, I., Ogut, M. G., Inci, F., Akin, D., Solaroglu, I., Ozoren, N., Unlu, et al
2023: e2205519
- **A Target Recycling Amplification Process for the Digital Detection of Exosomal MicroRNAs through Photonic Resonator Absorption Microscopy.** *Angewandte Chemie (International ed. in English)*
Wang, X., Shepherd, S., Li, N., Che, C., Song, T., Xiong, Y., Palm, I. R., Zhao, B., Kohli, M., Demirci, U., Lu, Y., Cunningham, B.
2023
- **Automated photonic resonator absorption microscope for point of care biomarker detection**
Liu, W., Takhmina, A., Wang, W., Skye, S., Wang, X., Kohli, M., Demirci, U., Cunningham, B. T., IEEE
IEEE.2023
- **A Photonic Resonator Interferometric Scattering Microscope for Label-free Detection of Nanometer-Scale Objects with Digital Precision in Point-of-Use Environments.** *bioRxiv : the preprint server for biology*
Liu, L., Tibbs, J., Li, N., Bacon, A., Shepherd, S., Lee, H., Chauhan, N., Demirci, U., Wang, X., Cunningham, B. T.
2022
- **Acoustic fabrication of living toroids and cardiomyocyte-based hybrid biorobots**
Demirci, U.
MARY ANN LIEBERT, INC.2022: 149
- **Large-Scale Functionalized Metasurface-Based SARS-CoV-2 Detection and Quantification.** *ACS nano*
Ahmed, R., Guimaraes, C. F., Wang, J., Soto, F., Karim, A. H., Zhang, Z., Reis, R. L., Akin, D., Paulmurugan, R., Demirci, U.
2022
- **Photochemical Targeting of Mitochondria to Overcome Chemoresistance in Ovarian Cancer.** *Photochemistry and photobiology*
Rickard, B. P., Overchuk, M., Obaid, G., Ruhi, M. K., Demirci, U., Fenton, S. E., Santos, J. H., Kessel, D., Rizvi, I.
2022
- **Automated Recognition of Plasmodium falciparum Parasites from Portable Blood Levitation Imaging.** *Advanced science (Weinheim, Baden-Wuerttemberg, Germany)*
Deshmukh, S. S., Byaruhanga, O., Tumwebaze, P., Akin, D., Greenhouse, B., Egan, E. S., Demirci, U.
2022: e2105396
- **Engineered living bioassemblies for biomedical and functional material applications.** *Current opinion in biotechnology*

Guimaraes, C. F., Soto, F., Wang, J., Akin, D., Reis, R. L., Demirci, U.

2022; 77: 102756

- **Mutant KRAS regulates transposable element RNA and innate immunity via KRAB zinc-finger genes.** *Cell reports*
Reggiardo, R. E., Maroli, S. V., Halasz, H., Ozen, M., Hrabeta-Robinson, E., Behera, A., Peddu, V., Carrillo, D., LaMontagne, E., Whitehead, L., Kim, E., Malik, S., Fernandes, et al
2022; 40 (3): 111104
- **Volbots: Volvox Microalgae-Based Robots for Multimode Precision Imaging and Therapy** *ADVANCED FUNCTIONAL MATERIALS*
Wang, J., Soto, F., Liu, S., Yin, Q., Purcell, E., Zeng, Y., Hsu, E., Akin, D., Sinclair, B., Stoyanova, T., Demirci, U.
2022
- **Endogenous Retroviral Elements Generate Pathologic Neutrophils in Pulmonary Arterial Hypertension.** *American journal of respiratory and critical care medicine*
Taylor, S., Isobe, S., Cao, A., Contrepolis, K., Benayoun, B. A., Jiang, L., Wang, L., Melemenidis, S., Ozen, M. O., Otsuki, S., Shinohara, T., Sweatt, A. J., Kaplan, et al
2022
- **Acoustic Fabrication of Living Cardiomyocyte-based Hybrid Biorobots.** *ACS nano*
Wang, J., Soto, F., Ma, P., Ahmed, R., Yang, H., Chen, S., Wang, J., Liu, C., Akin, D., Fu, K., Cao, X., Chen, P., Hsu, et al
2022
- **Robotic Pill for Biomarker and Fluid Sampling in the Gastrointestinal Tract** *ADVANCED INTELLIGENT SYSTEMS*
Soto, F., Purcell, E., Ozen, M., Sinawang, P., Wang, J., Akin, D., Demirci, U.
2022
- **A Label-Free Electrical Impedance Spectroscopy for Detection of Clusters of Extracellular Vesicles Based on Their Unique Dielectric Properties.** *Biosensors*
Zhang, Y., Murakami, K., Borra, V. J., Ozen, M. O., Demirci, U., Nakamura, T., Esfandiari, L.
2022; 12 (2)
- **A Cell Culture Chip with Transparent, Micropillar-Decorated Bottom for Live Cell Imaging and Screening of Breast Cancer Cells.** *Micromachines*
Ermis, M., Antmen, E., Kuren, O., Demirci, U., Hasirci, V.
1800; 13 (1)
- **Size- and density-dependent acoustic differential bioassembly of spatially-defined heterocellular architecture.** *Biofabrication*
Gu, L., Jiang, S., Xu, X., Wang, J., Xu, F., Fan, H., Shang, J., Liu, K., Demirci, U., Chen, P.
2022; 15 (1)
- **Advanced Point-of-Care Testing Technologies for Human Acute Respiratory Virus Detection.** *Advanced materials (Deerfield Beach, Fla.)*
Zhang, Z., Ma, P., Ahmed, R., Wang, J., Akin, D., Soto, F., Liu, B., Li, P., Demirci, U.
2021: e2103646
- **Progress and challenges in biomarker enrichment for cancer early detection.** *Progress in biomedical engineering (Bristol, England)*
Sinawang, P. D., Soto, F., Ozen, M. O., Akin, D., Demirci, U.
2021; 3 (4)
- **3DICE coding matrix multidirectional macro-architecture modulates cell organization, shape, and co-cultures endothelialization network.** *Biomaterials*
Canadas, R. F., Costa, J. B., Mao, Z., Gao, C., Demirci, U., Reis, R. L., Marques, A. P., Oliveira, J. M.
2021; 277: 121112
- **Malignant Ascites in Ovarian Cancer: Cellular, Acellular, and Biophysical Determinants of Molecular Characteristics and Therapy Response.** *Cancers*
Rickard, B. P., Conrad, C., Sorrin, A. J., Ruhi, M. K., Reader, J. C., Huang, S. A., Franco, W., Scarcelli, G., Polacheck, W. J., Roque, D. M., Del Carmen, M. G., Huang, H., Demirci, et al
2021; 13 (17)
- **Multiparametric biophysical profiling of red blood cells in malaria infection.** *Communications biology*
Deshmukh, S. S., Shakya, B., Chen, A., Durmus, N. G., Greenhouse, B., Egan, E. S., Demirci, U.

2021; 4 (1): 697

- **Engineering Hydrogel-Based Biomedical Photonics: Design, Fabrication, and Applications.** *Advanced materials (Deerfield Beach, Fla.)*
Guimaraes, C. F., Ahmed, R., Marques, A. P., Reis, R. L., Demirci, U.
2021: e2006582
- **Management of COVID-19: Current Status and Future Prospects.** *Microbes and infection*
Kabir, M. A., Ahmed, R., Chowdhury, R., Asher Iqbal, S. M., Paulmurugan, R., Demirci, U., Asghar, W.
2021: 104832
- **Towards Microfluidic-Based Exosome Isolation and Detection for Tumor Therapy.** *Nano today*
Wang, J., Ma, P., Kim, D. H., Liu, B., Demirci, U.
2021; 37
- **Reversible Design of Dynamic Assemblies at Small Scales** *ADVANCED INTELLIGENT SYSTEMS*
Soto, F., Wang, J., Deshmukh, S., Demirci, U.
2021; 3 (4)
- **Reversible Design of Dynamic Assemblies at Small Scales.** *Advanced intelligent systems (Weinheim an der Bergstrasse, Germany)*
Soto, F., Wang, J., Deshmukh, S., Demirci, U.
2021; 3 (4)
- **Diagnosis For COVID-19: Current Status and Future Prospects.** *Expert review of molecular diagnostics*
Kabir, A., Ahmed, R., Iqbal, S. M., Chowdhury, R., Paulmurugan, R., Demirci, U., Asghar, W.
2021
- **Micropatterned Surfaces Expose the Coupling between Actin Cytoskeleton-Lamin/Nesprin and Nuclear Deformability of Breast Cancer Cells with Different Malignancies.** *Advanced biology*
Antmen, E. n., Demirci, U. n., Hasirci, V. n.
2021; 5 (1): e2000048
- **Mitochondria-Rich Extracellular Vesicles Rescue Patient-Specific Cardiomyocytes From Doxorubicin Injury: Insights Into the SENECA Trial.** *JACC. CardioOncology*
O'Brien, C. G., Ozen, M. O., Ikeda, G., Vaskova, E., Jung, J. H., Bayardo, N., Santoso, M. R., Shi, L., Wahlquist, C., Jiang, Z., Jung, Y., Zeng, Y., Egan, et al
2021; 3 (3): 428-440
- **Wearable Collector for Noninvasive Sampling of SARS-CoV-2 from Exhaled Breath for Rapid Detection.** *ACS applied materials & interfaces*
Soto, F., Ozen, M. O., Guimarães, C. F., Wang, J., Hokanson, K., Ahmed, R., Reis, R. L., Paulmurugan, R., Demirci, U.
2021
- **Engineering Polysaccharide-Based Hydrogel Photonic Constructs: From Multiscale Detection to the Biofabrication of Living Optical Fibers.** *Advanced materials (Deerfield Beach, Fla.)*
Guimarães, C. F., Ahmed, R., Mataji-Kojouri, A., Soto, F., Wang, J., Liu, S., Stoyanova, T., Marques, A. P., Reis, R. L., Demirci, U.
2021: e2105361
- **Progress and challenges in biomarker enrichment for cancer early detection** *Progress in Biomedical Engineering*
Sinawang, P., Soto, F., Ozen, M. O., Akin, D., Demirci, U.
2021; 3 (4)
- **Emerging biofabrication approaches for gastrointestinal organoids towards patient specific cancer models.** *Cancer letters*
Soto, F. n., Guimarães, C. F., Reis, R. L., Franco, W. n., Rizvi, I. n., Demirci, U. n.
2021
- **Engineering the Interaction Dynamics between Nano-Topographical Immunocyte-Templated Micromotors across Scales from Ions to Cells.** *Small (Weinheim an der Bergstrasse, Germany)*
Wang, J., Ahmed, R., Zeng, Y., Fu, K., Soto, F., Sinclair, B., Soh, H. T., Demirci, U.
2020: e2005185
- **Atlas of Exosomal microRNAs Secreted From Human iPSC-Derived Cardiac Cell Types.** *Circulation*
Chandy, M., Rhee, J., Ozen, M. O., Williams, D. R., Pepic, L., Liu, C., Zhang, H., Malisa, J., Lau, E., Demirci, U., Wu, J. C.

2020; 142 (18): 1794–96

- **Enhancing the nanoplasmonic signal by a nanoparticle sandwiching strategy to detect viruses** *APPLIED MATERIALS TODAY*
Inci, F., Karaaslan, M., Mataji-Kojouri, A., Shah, P., Saylan, Y., Zeng, Y., Avadhani, A., Sinclair, R., Lau, D., Demirci, U.
2020; 20
- **Magnetic levitational bioassembly of 3D tissue construct in space.** *Science advances*
Parfenov, V. A., Khesuani, Y. D., Petrov, S. V., Karalkin, P. A., Koudan, E. V., Nezhurina, E. K., Pereira, F. D., Krokhmal, A. A., Gryadunova, A. A., Bulanova, E. A., Vakhrushev, I. V., Babichenko, I. I., Kasyanov, et al
2020; 6 (29): eaba4174
- **A confirmatory test for sperm in sexual assault samples using a microfluidic-integrated cell phone imaging system.** *Forensic science international. Genetics*
Deshmukh, S., Inci, F., Karaaslan, M. G., Ogut, M. G., Duncan, D., Klevan, L., Duncan, G., Demirci, U.
2020; 48: 102313
- **Enhancing cell packing in buckyballs by acoustofluidic activation.** *Biofabrication*
Ren, T., Steiger, W., Chen, P., Ovsianikov, A., Demirci, U.
2020; 12 (2): 025033
- **Flow-induced Shear Stress Confers Resistance to Carboplatin in an Adherent Three-Dimensional Model for Ovarian Cancer: A Role for EGFR-Targeted Photoimmunotherapy Informed by Physical Stress.** *Journal of clinical medicine*
Nath, S., Pigula, M., Khan, A. P., Hanna, W., Ruhi, M. K., Dehkordy, F. M., Pushpavanam, K., Rege, K., Moore, K., Tsujita, Y., Conrad, C., Inci, F., Carmen, et al
2020; 9 (4)
- **Tunable Fano-Resonant Metasurfaces on a Disposable Plastic-Template for Multimodal and Multiplex Biosensing.** *Advanced materials (Deerfield Beach, Fla.)*
Ahmed, R., Ozen, M. O., Karaaslan, M. G., Prator, C. A., Thanh, C., Kumar, S., Torres, L., Iyer, N., Munter, S., Southern, S., Henrich, T. J., Inci, F., Demirci, et al
2020: e1907160
- **Multiscale brain research on a microfluidic chip.** *Lab on a chip*
Zhao, Y., Demirci, U., Chen, Y., Chen, P.
2020
- **Fabrication of calcium phosphate 3D scaffolds for bone repair using magnetic levitational assembly.** *Scientific reports*
Parfenov, V. A., Mironov, V. A., Koudan, E. V., Nezhurina, E. K., Karalkin, P. A., Pereira, F. D., Petrov, S. V., Krokhmal, A. A., Aydemir, T., Vakhrushev, I. V., Zobkov, Y. V., Smirnov, I. V., Fedotov, et al
2020; 10 (1): 4013
- **A disposable microfluidic-integrated hand-held plasmonic platform for protein detection** *APPLIED MATERIALS TODAY*
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