

Stanford



Utkan Demirci

Professor of Radiology (Canary Cancer Center) and, by courtesy, of Electrical Engineering

Bio

BIO

Utkan Demirci is a tenured professor in the School of Medicine at Stanford University and serves as the Interim Division Chief and Director of the Canary Center at Stanford for Cancer Early Detection in the Department of Radiology. Prior to Stanford, he was an Associate Professor of Medicine at the Brigham and Women's Hospital, Harvard Medical School, and a faculty member of the Harvard-MIT Health Sciences and Technology division.

Professor Demirci received his PhD from Stanford University in Electrical Engineering in 2005 and holds M.S. degrees in Electrical Engineering, and in Management Science and Engineering. He has published over 200 peer-reviewed journal articles, 24 book chapters, 7 edited books, and several hundred abstracts and proceedings, as well as having over 25 patents and disclosures pending or granted. He has mentored and trained hundreds of successful scientists, entrepreneurs and academicians and fostered research and industry collaborations around the world. Dr. Demirci was awarded the NSF CAREER Award, and IEEE EMBS Early Career Award. He is currently a fellow of the the American Institute for Medical and Biological Engineering (AIMBE, 2017), and Distinguished Investigator of the Academy for Radiology and Biomedical Imaging Research and serves as an editorial board member for a number of peer-reviewed journals.

The BAMB Lab group focuses on developing innovative extracellular vesicle isolation tools, point-of-care technologies and creating microfluidic platforms for early cancer detection with broad applications to multiple diseases including infertility and HIV. Dr. Demirci's lab has collaborated with over 50 research groups and industry partners around the world. His seminal work in microfluidics has led to the development of innovative FDA-approved platform technologies in medicine and many of his inventions have been industry licensed. He holds several FDA-approved and CE-marked technologies that have been widely used by fertility clinics with assisted reproductive technologies leading to over thousands of live births globally and in the US.

Dr. Demirci is a serial academic entrepreneur and co-founder of DxNow, Zymot, Levitas Bio, Mercury Biosciences and Koek Biotech and serves as an advisor, consultant and/or board member to some early stage companies and investment groups.

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

HONORS AND AWARDS

- 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

- Co-founder and Scientific Advisor, Mercury Biosciences (2020 - present)
- Co-founder and Scientific Advisor, Levitas Inc (2017 - present)
- Co-founder and Scientific Advisor, DxNow Inc. (2013 - present)
- Co-founder and Scientific Advisor, Koek Biotech (2012 - 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, Sushruta Shashidhara Surappa

Doctoral Dissertation Advisor (AC)

Prima Dewi Sinawang

Postdoctoral Research Mentor

Suraj Pavagada

Publications

PUBLICATIONS

- **Co-axial hydrogel spinning for facile biofabrication of prostate cancer-like 3D models.** *Biofabrication*
Guimaraes, C. F., Liu, S., Wang, J., Purcell, E., Ozedirne, 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-Wurtemberg, 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., Contrepois, 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
- **3DICE coding matrix multidirectional macro-architecture modulates cell organization, shape, and co-cultures endothelization 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 (Weinheim an der Bergstrasse, Germany)*
Soto, F., Wang, J., Deshmukh, S., Demirci, U.
2021; 3 (4)
- **Reversible Design of Dynamic Assemblies at Small Scales** *ADVANCED INTELLIGENT SYSTEMS*
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
- **Emerging biofabrication approaches for gastrointestinal organoids towards patient specific cancer models.** *Cancer letters*
Soto, F. n., Guimaraes, C. F., Reis, R. L., Franco, W. n., Rizvi, I. n., Demirci, U. n.
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)
- **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
- **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
- **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., Krokmal, 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., Krokmal, A. A., Aydemir, T., Vakhrushev, I. V., Zobjkov, 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*
Inci, F., Saylan, Y., Kojouri, A., Ogut, M., Denizli, A., Demirci, U.
2020; 18
- **Total Microfluidic chip for Multiplexed diagnostics (ToMMx).** *Biosensors & bioelectronics*
Ozen, M. O., Sridhar, K., Ogut, M. G., Shanmugam, A., Avadhani, A. S., Kobayashi, Y., Wu, J. C., Haddad, F., Demirci, U.
2020; 150: 111930
- **A Circulating Bioreactor Reprograms Cancer Cells Toward a More Mesenchymal Niche.** *Advanced biosystems*
Calamak, S., Ermis, M., Sun, H., Islam, S., Sikora, M., Nguyen, M., Hasirci, V., Steinmetz, L. M., Demirci, U.
2020; 4 (2): e1900139
- **A Circulating Bioreactor Reprograms Cancer Cells Toward a More Mesenchymal Niche** *ADVANCED BIOSYSTEMS*
Calamak, S., Ermis, M., Sun, H., Islam, S., Sikora, M., Nguyen, M., Hasirci, V., Steinmetz, L. M., Demirci, U.
2020
- **A bioartificial liver support system integrated with a DLM/GelMA-based bioengineered whole liver for prevention of hepatic encephalopathy via enhanced ammonia reduction.** *Biomaterials science*
Wu, G. n., Wu, D. n., Lo, J. n., Wang, Y. n., Wu, J. n., Lu, S. n., Xu, H. n., Zhao, X. n., He, Y. n., Li, J. n., Demirci, U. n., Wang, S. n.
2020
- **BIO-INSPIRED MAGNETIC BEADS FOR ISOLATION OF SPERM FROM HETEROGENOUS SAMPLES IN FORENSIC APPLICATIONS.** *Forensic science international. Genetics*
Inci, F. n., Karaaslan, M. G., Gupta, R. n., Avadhani, A. n., Ogut, M. G., Atila, E. E., Duncan, G. n., Klevan, L. n., Demirci, U. n.
2020; 52: 102451
- **The Paracrine Function of Mesenchymal Stem Cells in Response to Pulsed Focused Ultrasound** *CELL TRANSPLANTATION*
Razavi, M., Rezaee, M., Telichko, A., Inan, H., Dahl, J., Demirci, U., Thakor, A. S.
2020; 29: 963689720965478
- **Medical Micro/Nanorobots in Precision Medicine** *Medical Micro/Nanorobots in Precision Medicine*
Soto, F., Wang, J., Ahmed, R., Demirci, U.
2020: 2002203
- **Facilitating islet transplantation using a three-step approach with mesenchymal stem cells, encapsulation, and pulsed focused ultrasound.** *Stem cell research & therapy*
Razavi, M. n., Ren, T. n., Zheng, F. n., Telichko, A. n., Wang, J. n., Dahl, J. J., Demirci, U. n., Thakor, A. S.
2020; 11 (1): 405
- **Label-free imaging of exosomes using depth scanning correlation (DSC) interferometric microscopy**
Aygun, U., Ozkumur, A., Durmus, N., Demirci, U., Urey, H., Shaked, N. T., Hayden, O.
SPIE-INT SOC OPTICAL ENGINEERING.2020
- **Entangled Nanoplasmonic Cavities for Estimating Thickness of Surface-Adsorbed Layers.** *ACS nano*
Mataji-Kojouri, A. n., Ozen, M. O., Shahabadi, M. n., Inci, F. n., Demirci, U. n.
2020
- **Levitating Cells to Sort the Fit and the Fat.** *Advanced biosystems*
Puluca, N. n., Durmus, N. G., Lee, S. n., Belbachir, N. n., Galdos, F. X., Ogut, M. G., Gupta, R. n., Hirano, K. I., Krane, M. n., Lange, R. n., Wu, J. C., Wu, S. M., Demirci, et al
2020: e1900300
- **Emerging organoid models: leaping forward in cancer research.** *Journal of hematology & oncology*
Fan, H., Demirci, U., Chen, P.

2019; 12 (1): 142

- **Soft Ring-Shaped Cellu-Robots with Simultaneous Locomotion in Batches.** *Advanced materials (Deerfield Beach, Fla.)*
Ren, T., Chen, P., Gu, L., Ogut, M. G., Demirci, U.
2019; e1905713
- **Activate capture and digital counting (AC + DC) assay for protein biomarker detection integrated with a self-powered microfluidic cartridge.** *Lab on a chip*
Che, C., Li, N., Long, K. D., Aguirre, M. A., Canady, T. D., Huang, Q., Demirci, U., Cunningham, B. T.
2019
- **Utility of High-Sensitivity and Conventional Troponin in Patients Undergoing Transcatheter Aortic Valve Replacement: Incremental Prognostic Value to B-type Natriuretic Peptide.** *Scientific reports*
Kobayashi, Y., Kim, J. B., Moneghetti, K. J., Fischbein, M., Lee, A., Watkins, C. A., Yeung, A. C., Liang, D., Ozen, M. O., Demirci, U., Bowen, R., Fearon, W. F., Haddad, et al
2019; 9 (1): 14936
- **Multi-stimuli-responsive programmable biomimetic actuator.** *Nature communications*
Dong, Y., Wang, J., Guo, X., Yang, S., Ozen, M. O., Chen, P., Liu, X., Du, W., Xiao, F., Demirci, U., Liu, B.
2019; 10 (1): 4087
- **Plasmonic-based platforms for diagnosis of infectious diseases at the point-of-care.** *Biotechnology advances*
Li, Z., Leustean, L., Inci, F., Zheng, M., Demirci, U., Wang, S.
2019; 107440
- **Amplification of nuclear deformation of breast cancer cells by seeding on micropatterned surfaces to better distinguish their malignancies.** *Colloids and surfaces. B, Biointerfaces*
Antmen, E., Demirci, U., Hasirci, V.
2019; 183: 110402
- **Square prism micropillars on poly(methyl methacrylate) surfaces modulate the morphology and differentiation of human dental pulp mesenchymal stem cells** *COLLOIDS AND SURFACES B-BIOINTERFACES*
Hasturk, O., Ermis, M., Demirci, U., Hasirci, N., Hasirci, V.
2019; 178: 44–55
- **Density Based Characterization of Mechanical Cues on Cancer Cells Using Magnetic Levitation** *ADVANCED HEALTHCARE MATERIALS*
Baday, M., Ercal, O., Sahan, A., Sahan, A., Ercal, B., Inan, H., Demirci, U.
2019; 8 (10)
- **Microfluidic Chip for Detection of Fungal Infections.** *ACS omega*
Asghar, W., Sher, M., Khan, N. S., Vyas, J. M., Demirci, U.
2019; 4 (4): 7474–81
- **Density Based Characterization of Mechanical Cues on Cancer Cells Using Magnetic Levitation.** *Advanced healthcare materials*
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