QINGSHAN WEI, Ph.D.

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Department of Chemical and Biomolecular Engineering
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EDUCATION

2012	Ph.D.	Chemistry, Purdue University (Advisor: Alexander Wei)
2007	M.S.	Polymer Materials & Engineering, Zhejiang University (ZJU) (Advisor: Jian Ji)
2005	B.S.	Polymer Materials & Engineering, Zhejiang University (ZJU)

POSITIONS

08/2023-	Associate Professor, Department of Chemical and Biomolecular Engineering, NC State
01/2017-08/2023	Assistant Professor, Department of Chemical and Biomolecular Engineering, NC State Emerging Plant Disease and Global Food Security Cluster, NC State
02/2012-12/2016	Postdoctoral Scholar, Bioengineering Depart., Electrical Engineering Depart., UCLA (Advisor: Aydogan Ozcan)

AWARDS & HONORS

Goodnight Early Career Innovator, NCSU, 2023
Honored in the "*Futures*" Issue, AIChE Journal, 2022
Best Pivot to Online Teaching Award, COE NCSU, 2021
NSF CAREER Award, 2020
Nano Research Young Innovator (NR45) Awards in NanoBiotech, 2018
Best Project Award, *HHMI Undergraduate Research, Training and Innovation Program*, UCLA, 2016
Chancellor's Award for Postdoctoral Research, Honorable Mention, UCLA, 2014
Bilsland Dissertation Fellowship, Purdue University, 2011
Research Foundation Fellowship, Purdue University, 2009
Graduation with Honors (M.S.), Zhejiang University, 2007
Graduation with Honors (B.S.), Zhejiang University, 2005
Haixiang Fellowship, Zhejiang University, 2004
Sinopec Fellowship, Zhejiang University, 2003
Excellent Graduate Scholarship (once), Excellent Undergraduate Scholarship (thrice), ZJU, 2001-2007

PROFESSIONAL SERVICE ON CAMPUS

Global One Health Academy (GOHA), Infectious Diseases Lead, 2023-
NCSU CAREER Proposal Workshop Panelist, 2023
Faculty Search Committee, CBE, 2022
Faculty Search Committee, Emerging Plant Disease and Global Food Security Cluster, 2022
NCSU Sensors Initiative, Planning Committee, 2022
Schoenborn Graduate Research Symposium, CBE, Co-Organizer, 2022; Organizer, 2023
"Future Leaders in Chemical Engineering" Selection Committee, CBE, 2021, 2023
James K. Ferrell Outstanding Ph.D. Graduate Award Selection Committee, CBE, 2020, 2022
NAE Grand Challenge Scholars Program Faculty Mentor, 2020

Panelist for Driving Food, Water and Energy Solutions, in *"Connect: A Series of Research Power Hours"*, 2020
Linde (previous Praxair) Exceptional Teaching Assistant Award Selection Committee, CBE, 2020, 2024
Graduate Admission and Recruiting Committee (GARC), CBE, Ad Hoc member, 2019-2021; member, 2023-
Schoenborn Graduate Research Symposium Best Presentation Selection Committee, CBE, 2019-2021
Internal proposal reviewer for Office of Undergraduate Research (OUR), 2019 & 2022
Internal proposal reviewer for CHHE Pilot Project, 2018 & 2021
Strategic member of the Global Food Security Institute (GFSI), 2017
KGSP Program Faculty Mentor, 2018
GEAR Program Faculty Mentor, 2017-2019

PROFESSIONAL SERVICE OFF CAMPUS

Founding Member, International Saliva Consortium, 2022
Editorial Board/Guest Editor:

a. Associate Editor, Analytical Chemistry, *Frontiers in Chemistry*, 2021-present
b. *Frontiers in Horticulture*, Research Topic "The Use of Volatile Organic Compounds in Sustainable Management of Pests and Diseases", 2023
c. *Biosensors,* Special Issue "Smartphone-Based Biosensors and Diagnostics," 2020
d. *Sensors and Actuators A,* Special Issue "Sensors for Precision and Digital Agriculture," 2020
e. *Frontiers in Chemistry,* Research Topic "Array-Based Sensing Techniques for Clinical, Agricultural Biotechnology, and Environmental Analysis," 2019
f. *Micromachines,* Special Issue on "Miniature Mobile Imaging and Sensing Devices," 2018

Conference Organizer:

a. Session chair, ACS Spring 2014 National Meeting, "*Biosensing and Diagnostics*", 2024
b. Program committee, BIODEVICES 2024, "*Workshop on Point-of-Care Diagnostic Devices: Current Trends and Future Opportunities (BIOSTEC)*", 2024
c. Program committee, SPIE Photonics West, "*Optics and Biophotonics in Low-Resource Settings IX*," 2023, 2024
d. Founding session chair, AIChE Annual Meeting, "*Sensors – Student Competition*," 2019-2022
e. Session chair, AIChE Annual Meeting, "*Biosensor Devices: Applications*," 2018
f. Session chair, BMES Annual Meeting, "*Optical Imaging III: Microscopy Advances*," 2015

Grant Reviewer:

a. DOE SC BRaVE, 2023
b. KU Leuven ID-N research projects, 2023
c. Minnesota Sea Grant, 2023
d. DOD CDMRP Melanoma Research Program (MRP), 2021
e. FLDOH Biomedical Research Programs, 2021
f. Israel Ministry of Science & Technology (MOST) program, 2021
g. UK Research and Innovation (UKRI) - Medical Research Council (MRC), 2021
h. Dutch Research Council (NWO) Talent Program, 2021
i. NSF GRFP, 2021 & 2022
j. NIH Early Career Reviewer (ECR), HVCD, 2020
k. NSF CBET-Biosensing, 2020
l. Canada Foundation for Innovation (CFI), 2020 & 2022
m. Maryland Industrial Partnerships Program (MIPS), 2018
n. UCLA ITS Research Proposal, 2018
o. NSF CAREER, CBET-EMBS, 2017

Journal Reviewer: *Nat Commun, Nat Electronics, Nat Food, Sci Adv, Commun Mater, Commun Eng, Light Sci Appl, ACS Nano, Adv Mater, Adv Sci, Adv Healthcare Mater, Adv Funct Mater, Nano Lett, ACS Cent Sci, Anal Chem, ACS Sensors, Biosens Bioelectron, Lab Chip, ACS Appl Mater Interfaces, etc. (>35 journals)*, 2012-present

NAE Grand Challenge Scholars Program Faculty Mentor, 2017
External Thesis Evaluator: Indian Institute of Technology Delhi, 2019
NC School of Science and Mathematics (NCSSM) Faculty Mentor, 2019-present
ACS Project SEED program faculty mentor, 2018

PUBLICATIONS

I. Journal Articles (* Corresponding author**,** † Equal contribution**,** Undergraduate, High school student, **Google Scholar** citation: **>6,600)**

1. S. Jamalzadegan, S. Kim, N. Mohammad, H. Koduri, Z. Hetzler, G. Lee, M. D. Dickey*, and **Q. Wei*** Liquid Metal-Based Biosensors: Fundamentals and Applications. ***Adv. Funct. Mater.*** 2024, accept
2. Z. Hetzler, N. Lott, A. Dey Poonam, S. Dalgan, **Q. Wei***. Single-Use Biosensors for Biomanufacturing: Perspective on the State-of-the-Art. ***Curr. Opin. Biomed. Eng.*** 2023, 28, 100512 (DOI)
3. N. Mohammad, L. Talton, Z. Hetzler, M. Gongireddy, and **Q. Wei***. Unidirectional Trans-cleaving Behavior of CRISPR-Cas12a Unlocks for an Ultrasensitive Assay Using Hybrid DNA Reporters Containing a 3′ Toehold. ***Nucleic Acids Res***, 2023, 51, 9894 (DOI).
4. T. Zhang, Q. Zeng, F. Ji, H. Wu, R. Ledesma-Amaro, **Q. Wei**, H. Yang, X. Xia, Y. Ren, K. Mu, Q. He, Z. Kang, and R. Deng*. In-Field Molecular Diagnostics of Crop Diseases by Smartphone-Based Mutation-Resolved Pathogenic RNA Analysis. ***Nature Commun***. 2023, 14, 4327 (DOI).
5. Y. Wang, S. Sadeghi, R. Paul, Z. Hetzler, E. Danilov, F. S. Ligler, and **Q. Wei***. Low-Rate Smartphone Videoscopy for Microsecond Luminescence Lifetime Imaging with Machine Learning. ***PNAS Nexus*** 2023, pgad313 (DOI).
6. G. Lee, O. Hossain, S. Jamalzadegan, Y. Liu, H. Wang, A. C. Saville, T. Shymanovich, R. Paul, D. Rotenberg, A. E. Whitfield, J. B. Ristaino, Y. Zhu*, and **Q. Wei***. Abaxial Leaf Surface-Mounted Multimodal Wearable Sensor for Continuous Plant Physiology Monitoring. ***Sci. Adv.*** 2023, 9, eade223 (DOI). Highlight: NC State News, Nature Food, Nature Plants, The Wall Street Journal
7. Z. Weng, Z. You, J. Yang, N. Mohammad, M. Lin, **Q. Wei**, X. Gao*, and Y. Zhang*. CRISPR-Cas Biochemistry and CRISPR-Based Molecular Diagnostics. ***Angew. Chem. Int. Ed.*** 2023, 62, e202214987 (DOI).
8. N. Mohammad, S. S. Katkam, and **Q. Wei***. A Sensitive and Nonoptical CRISPR Detection Mechanism by Sizing Double-Stranded DNA Reporter. ***Angew. Chem. Int. Ed.*** 2022, e202213920 (DOI).
9. G. Lee, M. Zarei, **Q. Wei***, Y. Zhu*, S. G. Lee*. Wrinkling for Flexible and Stretchable Sensors. ***Small*** 2022, 2203491 (DOI).
10. Z. Hetzler, Y. Wang, D. Krafft, S. Jamalzadegan, L. Overton, M. Kudenov, F. Ligler, and **Q. Wei***. Flexible Sensor Patch for Continuous Carbon Dioxide Monitoring. ***Front. Chem.*** 2022, 10, 983523 (DOI). Highlight: Editors' Showcase: Analytical Chemistry.
11. N. Mohammad, S. S. Katkam, and **Q. Wei***. Recent Advances in Clustered Regularly Interscaped Short Palindromic Repeats-Based Biosensors for Point-of-Care Pathogen Detection. ***CRISPR J.*** 2022, 5, 500-516 (DOI).
12. S. Wang, T. Pirzada, W. Xie, E. Barbieri, O. Hossain, C. H.Opperman, L. Pal, **Q. Wei**, G. N. Parsons*, and S. A. Khan*. Creating Hierarchically Porous Banana Paper-Metal Organic Framework (MOF) Composites with Multifunctionality. ***Appl. Mater. Today*** 2022, 28, 101517 (DOI).
13. S. Y. Son†, G. Lee†, H. Wang, S. Samson, **Q. Wei***, Y. Zhu*, and W. You*. Integrating Charge Mobility, Stability and Stretchability Within Conjugated Polymer Films for Stretchable Multifunctional Sensors. ***Nature Commun.*** 2022, 13, 2739 (DOI).
14. B. S. Miller, M. R. Thomas, M. Banner, J. Kim, Y. Chen, **Q. Wei**, D. K. Tseng, Z. S. Göröcs, A. Ozcan, M. M. Stevens, and R. A. McKendry*. Picomolar Lateral Flow Antigen Detection with Two-Wavelength Imaging of

Composite Nanoparticles. ***Biosens. Bioelectron.*** 2022, 207, 114133 (DOI).

15. L. Skolrood, Y. Wang, S. Zhang, and **Q. Wei***. Single-Molecule and Particle Detection on True Portable Microscopy Platforms. ***Sens. Actuator. Rep.*** 2022, 4, 100063 (DOI). Highlight: A focus issue for 2021 to honor Professor David Walt
16. G. Lee, **Q. Wei***, and Y. Zhu*. Emerging Wearable Sensors for Plant Health Monitoring. ***Adv. Funct. Mater.*** 2021, 31, 2106475 (DOI).
17. T. Yu, S. Zhang, R. Matei, W. Marx, C. L. Beisel, and **Q. Wei***. Coupling Smartphone and CRISPR–Cas12a for Digital and Multiplexed Nucleic Acid Detection. ***AIChE J.*** 2021, e17365 (DOI). Highlight: Futures Issue 2021
18. L. A. Stanciu*, **Q. Wei**, A. K. Barui, and N. Mohammad. Recent Advances in Aptamer-Based Biosensors for Global Health Applications. ***Annu. Rev. Biomed. Eng.*** 2021, 23, 433-459 (DOI).
19. Z. Li†, Y. Liu†, O. Hossain, R. Paul, S. Yao, S. Wu, J. B. Ristaino, Y. Zhu*, and **Q. Wei***. Real-Time Monitoring of Plant Stresses via Chemiresistive Profiling of Leaf Volatiles by a Wearable Sensor. ***Matter*** 2021, 4, 2553-2570 (DOI). Highlights: NC State News, WRAL, The British Society for Plant Pathology, Potato News Today
20. D. Y. Joh†, J. T. Heggestad†, S. Zhang†, G. R. Anderson, J. Bhattacharyya, S. E. Wardell, S. A. Wall, A. B. Cheng, F. Albarghouthi, J. Liu, S. Oshima, A. M. Hucknall, T. Hyslop, A. H. S. Hall, K. C. Wood, E. S. Hwang, K. C. Strickland, **Q. Wei***, and A. Chilkoti*. Cell Phone Enabled Point-of-Care Assessment of Breast Tumor Cytology and Molecular HER2 Expression from Fine Needle Aspirates. ***npj Breast Cancer***, 2021, 7, 85 (DOI).
21. Y. Wang, S. Zhang, and **Q. Wei***. Smartphone Videoscopy: Recent Progress and Opportunities for Biosensing. ***Adv. Opt. Technol.*** 2021, 10, 123-138 (DOI). Highlight: Special Issue: Smartphone Optics & Applications
22. J. B. Ristaino*, P. K. Anderson, D. P. Bebber, K. A. Brauman, N. J. Cunniffe, N. V. Fedoroff, C. Finegold, K.A. Garrett, C. A. Gilligan, C. Jones, M. D. Martin, G. K. MacDonald, P. Neenan, A. Records, D. G. Schmale, L. Tateosian, **Q. Wei**. The Persistent Threat of Emerging Plant Disease Pandemics to Global Food Security. ***Proc. Natl. Acad. Sci. USA*** 2021, 118, e2022239118 (DOI). Highlights: The Washington Post; World Economic Forum; Popular Science
23. R. Paul, E. Ostermann, Y. Chen, A. C. Saville, Y. Yang, Z. Gu, A. E. Whitfield, J. B. Ristaino, and **Q. Wei***. and Integrated Microneedle-Smartphone Nucleic Acid Amplification Platform for In-Field Diagnosis of Plant Diseases. ***Biosens. Bioelectron.*** 2021, 187, 113312 (DOI).
24. G. Silva*, J. Tomlinson, N. Onkokesung, S. Sommer, L. Mrisho, J. Legg, I. P. Adams, Y. Gutierrez-Vazquez, T. P. Howard, A. Laverick, O. Hossain, **Q. Wei**, K. M. Gold, and N. Boonham*. Plant Pest Surveillance: From Satellites to Molecules. ***Emerg. Top. Life Sci.*** 2021, ETLS20200300 (DOI).
25. K. Trofymchuk, V. Glembockyté, L. Grabenhorst, F. Steiner, C. Vietz, C. Close, M. Pfeiffer, L. Richter, M. L. Schütte, F. Selbach, R. Yaadav, J. Zähringer, **Q. Wei**, A. Ozcan, B. Lalkens, G. P. Acuna,* and P. Tinnefeld*. Addressable Nanoantennas with Cleared Hotspots for Single-Molecule Detection on a Portable Smartphone Microscope. ***Nature Commun***. 2021, 12, 950 (DOI).
26. D. Tholl*, O. Hossain, A. Weinhold, U. S.R. Rose, and **Q. Wei**. Trends and Applications in Plant Volatile Sampling and Analysis. ***Plant J.*** 2021, 106, 314-325 (DOI).
27. B. Ning, T. Yu, S. Zhang, Z. Huang, D. Tian, Z. Lin, A. Niu, N. Golden, K. Hensley, B. Threeton, C. J. Lyon, X.-M. Yin, C. J. Roy, N. S. Saba, J. Rappaport, **Q. Wei**, and T. Y. Hu*. A Smartphone-Read Ultrasensitive and Quantitative Saliva Test for COVID-19. ***Sci. Adv.*** 2020, 7, eabe3703 (DOI). Highlights: Forbes
28. R. Paul, E. Ostermann, and **Q. Wei***. Advances in Point-of-Care Nucleic Acid Extraction Technologies for Rapid Diagnosis of Human and Plant Diseases. ***Biosens. Bioelectron.*** 2020, 169, 112592 (**Review**) (DOI). Highlight: Special Issue on the Progress and Perspectives of Biosensing Research in North America
29. X. Chen, R. Hu, L. Hu, Y. Huang, W. Shi, **Q. Wei**, and Z. Li*. Portable Analytical Techniques for Monitoring Volatile Organic Chemicals in Biomanufacturing Processes: Recent Advances and Limitations. ***Front. Chem.*** 2020, 8, 837 (DOI). Highlight: Research Topic on Array-Based Sensing Techniques for Clinical, Agricultural Biotechnology, and Environmental Analysis

30. Z. Li, T. Yu, R. Paul, J. Fan, Y. Yang, and **Q. Wei***. Agricultural Nanodiagnostics for Plant Diseases: Recent Advances and Challenges. ***Nanoscale Adv.*** 2020, 2, 3083-3094 (DOI). Highlight: Nanoscale Advances Popular Advances Collection 2021
31. R. Paul, E. Ostermann, Z. Gu, J. B. Ristaino, and **Q. Wei***. DNA Extraction from Plant Leaves Using a Microneedle Patch. ***Curr. Protoc. Plant Biol.***, 2020, 5, e20104 (DOI). Highlight: Cover
32. S. Zhang, Z. Li, and **Q. Wei***. Smartphone-Based Cytometric Biosensors for Point-of-Care Cellular Diagnostics. ***Nanotechnol Precis Eng*** 2020, 3, 32-42 (DOI). Highlight: Special Issue on Micro/Nano Biosensors
33. J. B. Ristaino*, A. C. Saville, R. Paul, D. Cooper, and **Q. Wei**. Detection of *Phytophthora infestans* by LAMP, real-time LAMP and droplet digital PCR. ***Plant Disease*** 2020, 104, 708-716 (DOI).
34. Z. Li, R. Paul, T. Ba Tis, A. C. Saville, J. C. Hansel, T. Yu, J. B. Ristaino, and **Q. Wei***. Non-Invasive Plant Disease Diagnostics Enabled by Smartphone-Based Fingerprinting of Leaf Volatiles. ***Nature Plants*** 2019, 5, 856–866 (DOI). Highlight: NC State News, NatureAsia, C&EN, PhysOrg, New York Times, CBS17, Triangle Business Journal, 7news, TechExplorist, SeedWorld; In Chinese: Sohu, Xinhuanet, STDaily, Sina, CAS
35. Z. Li, S. Zhang, T. Yu, Z. Dai, and **Q. Wei***. Aptamer-Based Fluorescent Sensor Array for Multiplexed Detection of Cyanotoxins on a Smartphone. ***Anal. Chem.*** 2019, 91, 10448-10457 (DOI). Highlight: NC State News, NewAtlas, SmartWaterMagazine, Engineering360, TheEngineer, CBS17, Environmental Monitor
36. R. Paul, A. C. Saville, J. C. Hansel, Y. Ye, C. Ball, A. Williams, X. Chang, G. Chen, Z. Gu*, J. B. Ristaino*, and **Q. Wei***. Extraction of Plant DNA by Microneedle Patch for Rapid Detection of Plant Diseases. ***ACS Nano***, 2019, 13, 6540-6549 (DOI). Highlight: Cover, ACS Nano Virtual Issue, NC State News, EurekAlert, PhysOrg, WRAL, TheScientist, NewAtlas, ScienceDaily, Engineering360, BMES, Triangle Business Journal; In Chinese: Biodiscover, Polymer.CN, LinkResearcher
37. I. Hernández-Neuta, F. Neumann, J. Brightmeyer, T. Ba Tis, N. Madaboosi, **Q. Wei***, A. Ozcan*, and M. Nilsson*. Smartphone-Based Clinical Diagnostics: Towards Democratization of Evidence-Based Health Care. ***J. Intern. Med.*** 2019, 285,19-39 (DOI).
38. T. Yu and **Q. Wei***. Plasmonic Molecular Assays: Recent Advances and Applications for Mobile Health. ***Nano Res.*** 2018, 11, 5439-5473 (DOI).

Before NCSU (31 total):

39. C. Vietz, M. Schütte, **Q. Wei**, L. Richter, B. Lalkens, A. Ozcan*, P. Tinnefeld*, and G. Acuna*. Benchmarking Smartphone Fluorescence Based Microscopy with DNA Origami Nanobeads: Reducing the Gap Towards Single Molecule Sensitivity. ***ACS Omega***, 2019, 4, 637–642 (DOI). Highlight: ACS Editors' Choice
40. Y. Wu, A. Ray, **Q. Wei**, A. Feizi, X. Tong, E. Chen, Y. Luo, and A. Ozcan*. Deep Learning Enables High-Throughput Analysis of Particle-Aggregation-Based Biosensors Imaged Using Holography. ***ACS Photonics***, 2019, 6, 294–301 (DOI). Highlight: PhysOrg
41. S. Kahkeshani, J. E. Kong, **Q. Wei**, D. Tseng, O. B. Garner, A. Ozcan, and D. Di Carlo*. Ferrodrop Dose-Optimized-Digital Quantification of Biomolecules in Low-Volume Samples. ***Anal. Chem.*** 2018, 90, 8881-8888 (DOI).
42. D. Kim, **Q. Wei**, D. H. Kim, D. Tseng, J. Zhang, E. Pan, O. B. Garner, A. Ozcan, and D. Di Carlo*. Enzyme-free Nucleic Acid Amplification Assay Using a Cellphone-Based Well Plate Fluorescence Reader. ***Anal. Chem***. 2018, 90, 690-695 (DOI).
43. D. Y. Joh†, A. M. Hucknall†, **Q. Wei**, K. A. Mason, C. M. Fontes, R.T. Hill, R. Blair, Z. Zimmers, R. K. Achar, R. Gordan, M. Freemark, A. Ozcan, and A. Chilkoti*, Inkjet Printed Point-of-Care Immunoassay on a Nanoscale Polymer Brush Enables Sub-Picomolar Detection of Analytes in Blood. ***Proc. Natl. Acad. Sci. USA*** 2017, 114, E7054-E7062 (DOI). Highlights: The Engineer, IMechE
44. **Q. Wei**†, G. Acuna†, S. Kim†, C. Vietz, D. Tseng, J. Chae, D. Shir, W. Luo, P. Tinnefeld*, and A. Ozcan*. Plasmonics Enhanced Smartphone Fluorescence Microscopy. ***Sci. Rep.*** 2017, 7, 2124 (DOI). Highlights:

PhysOrg, Microscopy and Analysis, Biophotonics

45. J. Kong, **Q. Wei**, D. Tseng, J. Zhang, E. Pan, M. Lewinski, O. B. Garner, A. Ozcan, and D. Di Carlo*. Highly Stable and Sensitive Nucleic Acid Amplification and Cell-Phone based Readout. ***ACS Nano*** 2017, 11, 2934-2943 (DOI). Highlights: BioOpticsWorld, MedGadget
46. M. Kühnemund†, **Q. Wei**†, E. Darai, Y. Wang, I. Hernandez-Neuta, Z. Yang, D. Tseng, A. Ahlford, L. Mathot, T. Sjöblom, A. Ozcan*, and M. Nilsson*. Targeted DNA Sequencing and *in situ* Mutation Analysis Using Mobile Phone Microscopy. ***Nature Commun***. 2017, 8, 13913 (DOI). Highlights: NatureAsia, TheScientist, BBC, Photonics, OPN
47. J. C. Contreras-Naranjo, **Q. Wei**, and A. Ozcan*. Mobile Phone Based Microscopy, Sensing and Diagnostics. ***IEEE J. Sel. Top. Quant.*** 2016, 22, 7100414 (DOI).
48. B. Berg, B. Cortazar, D. Tseng, H. Ozkan, S. Feng, **Q. Wei**, R. Yan-Lok Chan, J. Burbano, Q. Farooqui, M. Lewinski, D. Di Carlo*, O. B. Garner*, and A. Ozcan*. Cellphone-Based Hand-Held Microplate Reader for Point-of-Care Testing of Enzyme-Linked Immunosorbent Assays. ***ACS Nano*** 2015, 9, 7857-7866 (DOI). Highlights: BioOpticsWorld
49. E. McLeod,† **Q. Wei**,† and A. Ozcan*. Democratization of Nanoscale Imaging and Sensing Tools using Photonics. ***Anal. Chem.*** 2015, 87, 6434-6445 (**Perspective review**) (DOI).
50. **Q. Wei**, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan*. Imaging and Sizing of Single DNA Molecules on a Mobile Phone. ***ACS Nano***, 2014, 8, 12725-12733 (DOI). Highlights: Top UCLA Stories of 2014; C&EN; OSA; OPN; LaserFocusWorld; The Scientist; Photonics; MaterialsViews China; BioOpticsWorld; Physics (APS)
51. **Q. Wei**, R. Nagi,† K. Sadeghi,† S. Feng, E. Yan, S. J. Ki, R. Caire, D. Tseng, and A. Ozcan*. Detection and Spatial Mapping of Mercury Contamination in Water Samples using a Smart Phone. ***ACS Nano***, 2014, 8, 1121-1129 (DOI). Highlights: ACS Editors' Choice; Nature; C&EN; Smithsonian; ChemistryViews; CNET
52. M. C. Stensberg, R. Madangopal, G. Yale, **Q. Wei**, H. Ochoa-Acuña, A. Wei, E. S. McLamore, J. Rickus, D. M. Porterfield, and M. S. Sepúlveda*. Silver Nanoparticle-Specific Mitotoxicity in *Daphnia Magna*. ***Nanotoxicology***, 2014, 8, 833-842 (DOI).
53. Z. Göröcs, Y. Ling, M. D. Yu, D. Karahalios, K. Mogharabi, K. Lu, **Q. Wei**, and A. Ozcan*. Giga-Pixel Fluorescent Imaging over an Ultra-Large Field-of-View Using a Flatbed Scanner. ***Lab Chip***, 2013, 13, 4460-4466 (DOI).
54. **Q. Wei**, H. Qi, W. Luo, D. Tseng, S. J. Ki, Z. Wan, Z. Göröcs, L. A. Bentolila, T.-T. Wu, R. Sun, and A. Ozcan*. Fluorescent Imaging of Single Nanoparticles and Viruses on a Smart Phone. ***ACS Nano***, 2013, 7, 9147-9155 (DOI). Highlights: ACS Nano Perspective; Nat. Nanotechnol.; C&EN; NIH; OSA; LA Times; Fox News; Scientific American; Wall Street Journal; The Engineer; NBC News
55. **Q. Wei**, E. McLeod, H. Qi, Z. Wan, R. Sun, and A. Ozcan*. On-Chip Cytometry using Plasmonic Nanoparticle Enhanced Lensfree Holography. ***Sci. Rep.*** 2013, 3, 1699 (DOI).
56. W. Xia, H.-M. Song, **Q. Wei**, and A. Wei*. Differential Response of Macrophages to Nanoparticles and Nanostars. ***Nanoscale*** 2012, 4, 7143-7148 (DOI).
57. Z. Tang, **Q. Wei**, and A. Wei*. Metal Mesh Lithography. ***ACS Appl. Mater. Interfaces*** 2011, 3, 4812-4818 (DOI).
58. M. C. Stensberg, **Q. Wei**, E. McLamore, D. M. Porterfield, A. Wei, and M. S. Sepúlveda*. Toxicological Studies on Silver Nanoparticles: Challenges and Opportunities in Assessment, Monitoring and Imaging. ***Nanomedicine*** 2011, 6, 879-898 (DOI).
59. **Q. Wei** and A. Wei*. Optical Imaging with Dynamic Contrast Agents. ***Chem. Eur. J.*** 2011, 17, 1080-1091 (DOI).
60. H.-M. Song, **Q. Wei**, Q. K. Ong, and A. Wei*. Plasmon-Resonant Nanoparticles and Nanostars with Magnetic Cores: Synthesis and Magnetomotive Imaging. ***ACS Nano*** 2010, 4, 5163-5173 (DOI). Highlights: ACS Nano Virtual Issue: Plasmonics

61. W. Zhou, J. Shao, Q. Jin, **Q. Wei**, J. Tang, and J. Ji*. Zwitterionic Phosphorylcholine as a Better Ligand for Gold Nanorods Cell Uptake and Selective Photothermal Ablation of Cancer Cells. ***Chem. Commun.*** 2010, 46, 1479-1481 (DOI).
62. **Q. Wei**, H.-M. Song, A. P. Leonov, J. A. Hale, D. Oh, Q. K. Ong, K. Ritchie, and A. Wei*. Gyromagnetic Imaging: Dynamic Optical Contrast Using Gold Nanostars with Magnetic Cores. ***J. Am. Chem. Soc.*** 2009, 131, 9728-9734 (DOI). Highlights: Cover; National Cancer Institute; ScienceDaily; BioOptics World; OpticsOrg
63. L. Tong, **Q. Wei**, A. Wei, and J.-X. Cheng*. Gold Nanorods as Contrast Agents for Biological Imaging: Optical Properties, Surface Conjugation and Photothermal Effects. ***Photochem. Photobiol.*** 2009, 85, 21-32 (DOI).
64. **Q. Wei**, W. Zhou, J. Ji*, and J. Shen. Thermosensitive Nanocables Prepared by Surface-Initiated Atom Transfer Radical Polymerization. ***Nanoscale Res. Lett.*** 2009, 4, 84-89 (DOI).
65. W. He, W. A. Henne, **Q. Wei**, Y. Zhao, D. D. Doorneweerd, J.-X. Cheng, P. S. Low, and A. Wei*. Two-Photon Luminescence Imaging of *Bacillus* Spores Using Peptide-Functionalized Gold Nanorods. ***Nano Res.*** 2008, 1, 450-456 (DOI). Highlight: Back cover
66. **Q. Wei**, J. Ji*, and J. Shen. pH Controlled Synthesis of High Aspect-Ratio Gold Nanorods. ***J. Nanosci. Nanotechnol.*** 2008, 8, 5696-5701 (DOI).
67. **Q. Wei**, J. Ji*, and J. Shen. Synthesis of Near-Infrared Responsive Gold Nanorod/PNIPAAm Core/Shell Nanohybrids via Surface Initiated ATRP for Smart Drug Delivery. ***Macromol. Rapid Commun.*** 2008, *29*, 645-650 (DOI). Highlights: Top 10 Highly Read Article in 2008
68. L. Wang, **Q. Wei**, C. Wu, Z. Hu, J. Ji, and P. Wang*. The *Escherichia coli* O157:H7 DNA Detection on a Gold Nanoparticle-Enhanced Piezoelectric Biosensor. ***Chinese Sci. Bull.*** 2008, *53*, 1175-1184 (DOI).
69. **Q. Wei**, J. Ji*, J. Fu, and J. Shen. Norvancomycin-Capped Silver Nanoparticles: Synthesis and Antibacterial Activities against *E. coli*. ***Sci. China Ser. B-Chem.*** 2007, *50*, 418-424 (DOI).

II. Non-Refereed Articles

1. Z. Li,* **Q. Wei**, and J. Han. Editorial: Array-Based Sensing Techniques for Clinical, Agricultural Biotechnology, and Environmental Analysis. ***Front. Chem.*** 2021, 9, 654707 (DOI).
2. **Q. Wei** and A. Ozcan. Smartphone Fluorescence Microscopy Allows Cost-Effective Molecular Diagnostics. ***BioPhotonics Magazine***, Aug 2017 (Link).
3. D. Kim, **Q. Wei**, J. E. Kong, A. Ozcan, and D. Di Carlo*. Research Highlights: Digital Assays on Chip. ***Lab Chip***, 2015, 15, 17-22 (DOI).

III. Book Chapters

1. R. Paul, E. Ostermann, and **Q. Wei***. Rapid Extraction of Plant Nucleic Acids by Microneedle Patch for In-Field Detection of Plant Pathogens, *in* Plant Pathology (Methods in Molecular Biology Series, vol 2536), (Ed: Nicola Luchi), Humana Press: New York, 2022, p 77-90 (Link).
2. J. T. Heggestad, D. S. Kinnamon, J. Liu, D. Y. Joh, C. M. Fontes, **Q. Wei**, A. Ozcan, A. M. Hucknall, and A. Chilkoti. Smartphone Enabled Point-of-Care Detection of Serum Biomarkers, *in* Biomedical Engineering Technologies (Methods in Molecular Biology Series, vol 2393), (Eds: M.R. Ossandon, H. Baker, A. Rasooly), Humana Press: New York, 2022, p 343-365 (Link).
3. S. Zhang, T. Ba Tis, and **Q. Wei***. Smartphone-based clinical diagnostics, *in* Precision Medicine for Investigators, (Eds: J. Faintuch, S. Faintuch) Practitioners and Providers, Elsevier Inc., 2019, p 493-508 (Link).
4. Z. Li, S. Zhang, and **Q. Wei***, Smartphone-Based Flow Cytometry, *in* Smartphone Based Medical Diagnostics, (Ed: J.Y. Yoon), Elsevier Inc., 2019, p 67-88 (Google ebook).

5. **Q. Wei** and A. Wei. Cellular Interactions of Plasmon-Resonant Gold Nanorods, *in* Organelle-Specific Pharmaceutical Nanotechnology, (Eds: V. Weissig, G. G. D'Souza), John Wiley & Sons, Inc.: Hoboken, New Jersey, 2010, p 507-534 (Google ebook).
6. **Q. Wei** and A. Wei. Signal Generation with Gold Nanoparticles: Photophysical Properties for Sensor and Imaging Applications, *in* The Supramolecular Chemistry of Organic-Inorganic Hybrid Materials, (Eds: K. Rurack, R. Martínez-Máñez), John Wiley & Sons, Inc.: 2010, p 319-349 (Google ebook).
7. A. Wei, **Q. Wei**, and A. P. Leonov. Gold Nanorods as Theranostic Agents, *in* Nanoplatform-Based Molecular Imaging, (Ed: X. Chen), John Wiley & Sons, Inc.: New York, 2010, p 659-681 (Google ebook).
8. **Q. Wei** and A. Wei. Plasmon-Resonant Gold Nanorods as Multifunctional Agents for Diagnostics, Imaging, and Photothermal Therapy, *in* Handbook of Materials for Nanomedicine, (Eds: V. P. Torchilin, M. M. Amiji), Pan Stanford Publishing: Singapore, 2010, p 585-632.
9. A. Wei, A. P. Leonov, and **Q. Wei**. Gold Nanorods: Multifunctional Agents for Cancer Imaging and Therapy, *in* Cancer Nanotechnology: Methods and Protocols (Methods in Molecular Biology Series), (Eds: S. R. Grobmyer, B. M. Moudgil), Humana Press: New York, 2010, p 119-130 (Link).
10. **Q. Wei** and A. Wei. Plasmon-Resonant Gold Nanorods: Photophysical Properties Applied toward Biological Imaging and Therapy, *in* Inorganic Nanoprobes for Biological Sensing and Imaging, (Eds: H. Mattoussi, J. Cheon), Artech House: New York, 2009, p 197-233 (Link).

IV. Conference Proceedings

1. Y. Wu, A. Ray, **Q. Wei**, A. Feizi, X. Tong, E. Chen, Y. Luo, and A. Ozcan, Deep Learning-Based Sensing of Viruses Using a Particle Aggregation Assay. *Proc. SPIE,* Vol. 11230, Paper # 112300S (Photonics West 2020) (DOI).
2. Y. Wu, A. Ray, **Q. Wei**, A. Feizi, X. Tong, E. Chen, Y. Luo, and A. Ozcan, Particle-Aggregation Based Virus Sensor Using Deep Learning and Lensless Digital Holography. *CLEO* 2019, Paper # ATu4K.3 (DOI).
3. **Q. Wei**, G. Acuna, S. Kim, C. Vietz, D. Tseng, J. Chae, D. Shir, W. Luo, P. Tinnefeld, and A. Ozcan, Plasmonics Improves the Sensitivity of Smartphone Fluorescence Microscopy. *CLEO* 2018, Paper # AM1J.4 (DOI).
4. M. Kühnemund, **Q. Wei**, E. Darai, Y. Wang, I. Hernandez-Neuta, Z. Yang, D. Tseng, A. Ahlford, L. Mathot, T. Sjöblom, A. Ozcan, and M. Nilsson, *In Situ* Detection of Point Mutations and Targeted DNA Sequencing Using Mobile Phone Microscopy. *Proc. SPIE,* Vol. 10485, Paper # 104850R (Photonics West 2018) (DOI).
5. **Q. Wei**, G. Acuna, S. Kim, C. Vietz, D. Tseng, J. Chae, D. Shir, W. Luo, P. Tinnefeld, and A. Ozcan, Surface-Enhanced Fluorescence Microscopy on a Smartphone. *Proc. SPIE,* Vol. 10485, Paper # 104850L (Photonics West 2018) (DOI).
6. B. Berg, B. Cortazar, D. Tseng, H. Ozkan, S. Feng, **Q. Wei**, R. Y. Chan, J. Burbano, Q. Farooqui, M. Lewinski, D. Di Carlo, O. B. Garner, and A. Ozcan, A Smartphone-Based Microplate Reader for Point-of-Care ELISA Quantification. *CLEO* 2016, Paper # ATu1O.4 (DOI).
7. **Q. Wei**, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan. Single DNA Imaging and Length Quantification through a Mobile Phone Microscope. *Proc. SPIE,* Vol. 9699, Paper # 969903 (Photonics West 2016) (DOI).
8. B. Berg, B. Cortazar, D. Tseng, H. Ozkan, S. Feng, **Q. Wei**, R. Y. Chan, J. Burbano, Q. Farooqui, M. Lewinski, D. Di Carlo, O. B. Garner, and A. Ozcan. Cellphone-Based Hand-Held Microplate Reader for Point-of-Care ELISA Testing. *Proc. SPIE,* Vol. 9699, Paper # 969905 (Photonics West 2016) (DOI).
9. **Q. Wei**, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan. Field-Portable Smartphone Microscopy Platform for Wide-field Imaging and Sizing of Single DNA Molecules. *CLEO* 2015, Paper # ATh4J.6 (DOI).

10. **Q. Wei**, H. Qi, W. Luo, D. Tseng, L. A. Bentolila, T.-T. Wu, R. Sun, and A. Ozcan. Single Nanoparticle and Virus Detection Using a Smart Phone Based Fluorescence Microscope. *CLEO* 2014, Paper # AW3L.1 (DOI).
11. Z. Göröcs, Y. Ling, M. D. Yu, D. Karahalios, K. Mogharabi, K. Lu, **Q. Wei**, and A. Ozcan. Fluorescent Imaging over an Ultra-Large Field-of-View of 532 cm^2 Using a Flatbed Scanner. *Proc. SPIE,* Vol. 8951, Paper # 89510D (Photonics West 2014) (DOI).
12. **Q. Wei**, E. McLeod, H. Qi, Z. Wan, R. Sun, and A. Ozcan. Lensfree Holographic Cytometry Using Plasmonic Nanoparticles. *IEEE Photonics Conference (IPC)* 2013, p 3-4 (DOI).
13. L. Wang, **Q. Wei**, C. Wu, J. Ji, Q. Liu, M. Yang, and P. Wang. Detection of *E-coli* O157:H7 DNA by a Novel QCM Biosensor Coupled with Gold Nanoparticles Amplification. *7th IEEE International Conference on Nanotechnology* 2007, *1-3*, 330-333 (DOI).
14. L. Wang, **Q. Wei**, C. Wu, J. Ji, and P. Wang. A QCM Biosensor Based on Gold Nanoparticles Amplification for Real-time Bacteria DNA Detection. *IEEE International Conference on Information Acquisition* 2007, *1-2*, 46-51 (DOI).

V. Patents

1. **Q. Wei**, O. Hossain, E. Soeryapranata, K. J. Bandaccari, T. R. Howell, K. Bitra, and Y. Su. "Method and Device for Rapid Onion VOC Analysis", US Provisional Patent Application Serial No. 63/531,771, Aug 9, 2023.
2. **Q. Wei**, and S. Zhang, "A Modular Smartphone Microscopy Device for Multimodal Imaging", International Application No. PCT/US2021/057670, Nov 2, 2021.
3. **Q. Wei**, J. B. Ristaino. "Microneedle-Based Extraction From Plant Seeds and Other Plant Tissues, Related Methods, Systems, and Devices", US Provisional Patent App. 63/208,828, June 8, 2021.
4. **Q. Wei**, J. B. Ristaino, R. Paul, and Z. Gu. "Microneedle-Based Rapid Analyte Extraction From Plant and Animal Tissues and Related Methods and Systems", US 2021/0380965, June 8, 2021.
5. **Q. Wei**, Z. Li, J. B. Ristaino. "Methods and Systems for Assessing Plant Conditions by Volatile Detection", WO/2021/011447, July 13, 2020; US2022/0236242A1.
6. A. Ozcan, O. Garner, D. Di Carlo, **Q. Wei**, D. Tseng, and J. Kong. "Mobile Phone Based Fluorescent Multi-Well Plate Reader", U.S. Patent 2019/0346369, Nov 14, 2019.
7. A. Ozcan, **Q. Wei**, W. Luo. "Method and Device for Single Molecule Imaging", U.S. Patent 2017/0160197, Jun 8, 2017.
8. A. Ozcan, **Q. Wei**. "Method and Device for Detection and Spatial Mapping of Mercury Concentration in Water Samples", U.S. Patent 2016/0327473, Nov 10, 2016.
9. A. Ozcan, **Q. Wei**. "Method and Device for Fluorescent Imaging of Single Nano-Particles and Viruses", U.S. Patent 2016/0070092, Mar 10, 2016.
10. J. Ji, J. Xu, W. Zhou, X. Liu, Q. Jin, **Q. Wei**. "Compound of Gold Nanorods and Zwitter Ion Molecules for Photo-thermal Therapy of Cancer and Preparation Method Thereof", China Patent CN101785784A, Jul 28, 2010.

TALKS AND PRESENTATIONS

Invited Talks:

1. Q. Wei, "Smartphone Diagnostics Meets CRISPR", *CRISPR in Diagnostics*, ***CRISPR Virtual Event Series 2023***, Nov 1, 2023 (virtual).
2. Q. Wei, "Smartphone Diagnostics Meets CRISPR", *Wearable Sensors, Lab-on-Chips and Point-of-Care Testing 1*, ***244th ECS Meeting***, Oct 10, 2023 (virtual).
3. Q. Wei, "Microneedle Innovation for Plant Health and Breeding", ***BASF Innovation Day***, RTP, NC, Sep 27, 2023.

4. Q. Wei, "Point-of-Care Nucleic Acid Testing for Human and Plant Diseases", N*ext-Generation Molecular Diagnostics*, ***iCANX Youth Talks*** (Vol. 29), Aug 29, 2023 (virtual).
5. Q. Wei, "Point-of-Care Nucleic Acid Testing for Human and Plant Diseases", ***Genetics and Genomics Academy 2023 Retreat***, Raleigh, NC, Aug 25, 2023.
6. Q. Wei, "Field Sensors for Plant Disease and Stress Monitoring", ***Farm to Table Sensing Technology***, Jul 11, 2023 (virtual).
7. Q. Wei, "Field Sensors for Plant Disease and Stress Monitoring", ***Nanoplant Seminar***, Jul 6, 2023 (virtual).
8. Q. Wei, "Point-of-Care and Plant Diagnostics by Connected Smartphone Sensors", ***Molecular Medicine Young Forum, Chinese Chemical Society***, Oct 27, 2023 (virtual).
9. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***IConS: Workshop on Connected Sensor Systems***, Raleigh, NC, Feb 23, 2023.
10. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", *Revolutionary Biosensing: From the Present to the Future*, ***ACS Fall 2022 National Meeting***, Chicago, IL, Aug 22, 2022.
11. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", *Point of Care and Compact Biosensors*, ***2022 Optical Sensors and Sensing Congress (Optica)***, Vancouver, Canada, Jul 12, 2022 (virtual).
12. Q. Wei, "Multifunctional Microfluidic Chip for Rapid Vector Genome and Empty Capsid Quantitation in AAV Vector Production", ***NIIMBL Forum***, Jun 30, 2022 (virtual).
13. Q. Wei, "In-Field Sensors for Plant Volatile Analysis", *Fresh from the Field: New IPM Technologies in Entomology and Plant Pathology*, ***10th International IPM Symposium***, Denver, CO, Feb 29, 2022.
14. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***Missouri University of Science and Technology, Department of Chemical and Biochemical Engineering***, Nov 15, 2021 (virtual).
15. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***Duke University, Department of Chemistry***, Nov 2, 2021.
16. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***Pennsylvania State University, School of Electrical Engineering and Computer Science***, Oct 29, 2021 (virtual).
17. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***University of Connecticut, Department of Chemical and Biomolecular Engineering***, Oct 28, 2021 (virtual).
18. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***Purdue University, Department of Chemistry***, Oct 19, 2021.
19. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***UNC Chapel Hill, Department of Chemistry***, Apr 19, 2021.
20. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***BASF Innovation Team (ITeam) Spotlight Talk***, Feb 18, 2021 (virtual).
21. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Smartphone Sensors", ***ASSIST Distinguished Seminar***, NCSU, Sep 10, 2020 (virtual).
22. Q. Wei and Y. Zhu, "AgBio Sensors: Opportunities and Progress", ***Emerging Plant Disease and Global Food Security Cluster Symposium***, Raleigh, NC, Jan 10, 2020.
23. Q. Wei, "Point-of-Care and AgBio Diagnostics by Connected Biosensors", ***Sigma Xi Pizza Lunch Series***, RTP, NC, Nov 19, 2019.
24. Q. Wei. "AgBio Sensors: Opportunities and Progresses" ***RTP AgBio + AgTech Meetup***, Raleigh, NC, Oct 23, 2019.
25. Q. Wei. "Noninvasive Diagnosis of Late Blight via Smartphone-Based Fingerprinting of Leaf Volatiles", ***Stewards of the Future – Plants and Sensors***, Raleigh, NC, Dec 3, 2018.
26. Q. Wei, "Surface-Enhanced Fluorescence Microscopy on a Smartphone", ***Light Conference 2018***, Changchun, China, July 17-18, 2018.

27. Q. Wei, "Miniature Imaging and Sensing Devices for Global Health Applications", ***ASSIST Speaker Seminar***, NC State, Apr 20, 2018.
28. Q. Wei, "Plant Disease Diagnostics: The Next Generation", ***INTRINSyC Seminar***, NC State, Mar 30, 2018.
29. Q. Wei, "Smartphone-Based Devices for Optical Imaging and Sensing: From Mobile Health to Plant Disease Detection", ***Emerging Plant Disease and Global Food Security (EPDGFS) Cluster Seminar***, NC State, Feb 14, 2018.
30. Q. Wei, "Mobile Phone-Based Optical Imaging Devices for Point-of-Care Diagnostics and Sensing", ***Toxicology Program Seminar***, NC State, Nov 28, 2017.
31. Q. Wei, "Transforming Medical Diagnostics with Smartphones", Emerging Technologies and Applications in Materials for Health & Medicine, ***EITA-New Materials 2017***, Ann Arbor, MI, Jul 1, 2017.
32. Q. Wei, "Transforming Medical Diagnostics with Smartphones", ***Institute of Cyber-Systems and Control, Zhejiang University***, Hangzhou, China, Mar 31, 2017.
33. Q. Wei, "Transforming Medical Diagnostics with Smartphones", ***Institute of Translational Medicine, Zhejiang University***, Hangzhou, China, Mar 30, 2017.

Contributed Oral Presentations (Presenter Underlined):

1. O. Hossain, Y. Wang, M. Li, S. Jamalzadegan, N. Mohammad, A.D. Poonam, and Q. Wei, "Development of a Dual-Functional Microneedle-based Colorimetric VOC Sensing Technology for Onion Variety Differentiation", ***2023 AIChE Annual Meeting***, Orlando, FL, Nov 7, 2023.
2. N. Mohammad, L. Talton, Z. Hetzler, M. Gongireddy, Q. Wei, "Preferential Trans-Cleaving Behavior of CRISPR-Cas12a Towards 3'-Overhang dsDNA Unlocks to Develop Ultrasensitive Hybrid DNA Reporter", ***2023 AIChE Annual Meeting***, Orlando, FL, Nov 6, 2023.
3. Z. Hetzler, S. Marinakos, N. Lott, N. Mohammad, A. Lass-Napiorkowska, L. Turrentine, D. Fields, L. Overton, O. Rammo, H. George, and Q. Wei, "A Platform CRISPR-Cas12a Assay for Rapid Quantification of Adeno-Associated Virus Vector Genome Titers", *Biosensors for Nucleic Acids*, ***2023 AIChE Annual Meeting***. Orlando, FL, Nov 6, 2023.
4. N. Mohammad, L. Talton, S. Dalgan, Q. Wei, "CRISPR-Cas12a-Induced DNA Supercoil Relaxation for Nonfluorescent Ratiometric DNA Detection", ***2023 BMES Annual Meeting***, Seattle, WA, Oct 13, 2023.
5. S. Jamalzadegan, G. Lee, and Q. Wei, "Machine Learning for Sensor Data Integration and Quantitative Early Detection of Plant Diseases", ***BASF Two Minute Pitch Research Competition 2023***, RTP, NC, Oct 4, 2023.
6. Z. Hetzler, "Rapid Adeno-Associated Virus Vector Genome Quantification with Amplification-Free CRISPR-Cas12a Diagnostics", ***2023 Schoenborn Graduate Research Symposium***, Raleigh, NC, Oct 3, 2023.
7. N. Mohammad, "CRISPR-Cas12a-based Point-of-Care Detection Using dsDNA as Inexpensive and Nonfluorescent Reporter Molecule", ***2023 Schoenborn Graduate Research Symposium***, Raleigh, NC, Oct 3, 2023.
8. O. Hassain, "Rapid Vegetable Species Classification by a Low-Cost Needle-Integrated VOC Sensor Device", ***2023 Schoenborn Graduate Research Symposium***, Raleigh, NC, Oct 3, 2023.
9. O. Hossain, Y. Wang, M. Li, A.D. Poonam, S. Jamalzadegan, and Q. Wei, "Classification of Onion Species by A Microneedle-Integrated VOC Sensor Device", ***ACS Fall 2023 National Meeting***, San Francisco, CA, Aug 14, 2023.
10. Z. Hetzler, " Development of Rapid Adeno-Associated Virus Quantification Device with CRISPR-Cas12a", ***BioLunch 2023 Seminar Series***, NC State University, Raleigh, NC, Aug 2, 2023.
11. Z. Hetzler, S. Marinakos, N. Lott, N. Mohammad, A. Lass-Napiorkowska, L. Turrentine, D. Fields, L. Overton, O. Rammo, H. George, and Q. Wei, "Rapid Adeno-Associated Virus Vector Genome Quantification with Amplification-Free CRISPR-Cas12a Diagnostics", *Cell and Gene Therapies*, ***ACS Fall 2023 National Meeting,*** San Francisco CA, Aug 13, 2023.

12. N. Mohammad, M. Gongireddy, Q. Wei, "CRISPR-Cas12a-Induced Unidirectional Trans-Cleaving of dsDNA Substrate with Overhang", ***BioLunch 2023 Seminar Series***, NC State University, Raleigh, NC, Jun 14, 2023.
13. Y. Wang, S. Sadeghi, R. Paul, E. Danilov, F. S. Ligler, and Q. Wei, "Smartphone Videoscopy for Luminescence Lifetime Imaging", Optics and Biophotonics in Low-Resource Settings IX, ***SPIE Photonics West***, San Francisco, CA, Jan 28, 2023.
14. N. Mohammad, S. Katkam, and Q. Wei, "Nonfluorescent CRISPR-Cas12a Biosensor by Sizing λ DNA", *Student Competition in Sensors*, ***2022 AIChE Annual Meeting***, Phoenix, AZ, Nov 14, 2022.
15. Z. Hetzler, Y. Wang, D. Kraft, L. Overton, M. Kudenov, F. Ligler, and Q. Wei, "Next-Generation Carbon Dioxide Measurement: Flexible Sensor Patch for Continuous Monitoring", *Sensors & Biosensors for Widespread Environmental Monitoring*, ***ACS Fall 2022 National Meeting***, Chicago, IL, Aug 21, 2022.
16. N. Mohammad, S. Katkam, and Q. Wei, "Ultrasensitive CRISPR-Cas12a Assay Using λ DNA as Reporter Molecules", *Microfluidics/Paper-Based Diagnostics*, ***ACS Fall 2022 National Meeting***, Chicago, IL, Aug 21, 2022.
17. R. Paul, E. Ostermann, Y. Chen, A. C. Saville, Y. Yang, Z. Gu, A. E. Whitfield, J. B. Ristaino, and Q. Wei, "Microneedle Extraction and Smartphone-based Isothermal Amplification: A Rapid Solution for In-field Detection of Plant Pathogens", ***Plant Health 2021 (American Phytopathological Society (APS) Annual Conference)***, Aug 2-6, 2021 (virtual).
18. R. Paul, "Integrated Microneedle-Smartphone Nucleic Acid Amplification Platform for In-Field Diagnosis of Plant Diseases", ***2020 Fall Schoenborn Graduate Research Symposium***, Raleigh, NC, Sep 22, 2020.
19. Y. Wu, A. Ray, Q. Wei, A. Feizi, X. Tong, E. Chen, Y. Luo, and A. Ozcan, "Deep Learning-Based Sensing of Viruses Using a Particle Aggregation Assay", *Optics and Biophotonics in Low-Resource Settings VI*, ***SPIE Photonics West***, San Francisco, CA, Feb 4-6, 2020.
20. R. Paul, A. C. Saville, J. C. Hansel, Y. Ye, C. Ball, A. Williams, X. Chang, G. Chen, Z. Gu, J. B. Ristaino, and Q. Wei, "Minimally Invasive Extraction of Plant DNA Via a Polymeric Microneedle Patch for on-Site Detection of Plant Pathogens", *Student Paper Competition in Sensor Technology*, ***2019 AIChE Annual Meeting***, Orlando, FL, Nov 10-15, 2019.
21. T, Yu, "Digital Enzyme-Free DNA Amplification Assay for Point-of-Care Diagnosis of miRNA", ***BioLunch 2019 Seminar Series***, NC State University, Raleigh, NC, Jul 31, 2019.
22. Z. Li, R. Paul, T. Ba Tis, A. C. Saville, J. C. Hansel, T. Yu, J. B. Ristaino, and Q. Wei, "A Smartphone-Based Volatile Sensor Platform for Noninvasive Detection of Plant Pathogens", *Advanced detection and diagnosis of plant diseases,* ***Plant Health 2019 (American Phytopathological Society (APS) Annual Conference)***, Cleveland, OH, Aug 3-8, 2019.
23. R. Paul, A. C. Saville, J. C. Hansel, Y. Ye, C. Ball, A. Williams, X. Chang, G. Chen, Z. Gu, J. B. Ristaino, and Q. Wei, "Microneedle-based Rapid Plant DNA Extraction: Towards In-Field Detection of Plant Pathogens", *Advanced detection and diagnosis of plant diseases,* ***Plant Health 2019 (American Phytopathological Society (APS) Annual Conference)***, Cleveland, OH, Aug 3-8, 2019.
24. Y. Wu, A. Ray, Q. Wei, A. Feizi, X. Tong, E. Chen, Y. Luo, and A. Ozcan, "Particle-Aggregation Based Virus Sensor Using Deep Learning and Lensless Digital Holography", *Biosensing Technology*, ***CLEO 2019***, San Jose, CA, May 5-10, 2019.
25. P. Tinnefeld, G. P. Acuna, Q. Wei, A. Ozcan, C. Vietz, B. Lalkens, K. Trofymchuk, C. M. Close, H. Inan, S. Ochmann, L. Grabenhorst, and V. Glembockyte, "DNA origami nanotools for single-molecule biosensing and superresolution microscopy", *Soft Matter*, ***Optical Manipulation and Its Applications 2019***, Tucson, AZ, Apr 15-17, 2019.
26. Z. Li, R. Paul, T. Ba Tis, A. C. Saville, J. C. Hansel, T. Yu, J. B. Ristaino, and Q. Wei, "Noninvasive Diagnosis of Tomato Late Blight via Smartphone Fingerprinting of Leaf Volatiles", ***ACS Spring 2019 National Meeting***, Orlando, FL, Mar 31- Apr 4, 2019.

27. M. Kühnemund, Q. Wei, E. Darai, Y. Wang, I. Hernandez-Neuta, Z. Yang, D. Tseng, A. Ahlford, A. Ozcan, and M. Nilsson, "KRAS Point Mutation Detection and Targeted DNA Sequencing on a Mobile Phone", *Diagnostic Technology for Low-Resource Settings*, ***2018 BMES Annual Meeting***, Atlanta, GA, Oct 17-20, 2018.
28. R. Paul, "A Field-Portable Microneedle Patch-Based Rapid Plant DNA Extraction Method for Emerging Plant Disease Diagnosis", ***BioLunch 2018 Seminar Series***, NC State University, Raleigh, NC, Jul 25, 2018.
29. Q. Wei, G. Acuna, S. Kim, C. Vietz, D. Tseng, J. Chae, D. Shir, W. Luo, P. Tinnefeld, and A. Ozcan, "Plasmonics Improves the Sensitivity of Smartphone Fluorescence Microscopy", *Advanced Microscopy and Imaging Techniques*, ***CLEO 2018***, San Jose, CA, May 13-18, 2018.
30. Q. Wei, G. Acuna, S. Kim, C. Vietz, D. Tseng, J. Chae, D. Shir, W. Luo, P. Tinnefeld, and A. Ozcan, "Surface-Enhanced Fluorescence Microscopy on a Smartphone", *Optics and Biophotonics in Low-Resource Settings IV*, ***SPIE Photonics West***, San Francisco, CA, Jan 28, 2018.
31. M. Kühnemund, Q. Wei, E. Darai, Y. Wang, I. Hernandez-Neuta, Z. Yang, D. Tseng, A. Ahlford, L. Mathot, T. Sjöblom, A. Ozcan, and M. Nilsson, "*In Situ* Detection of Point Mutations and Targeted DNA Sequencing Using Mobile Phone Microscopy", *Optics and Biophotonics in Low-Resource Settings IV*, ***SPIE Photonics West***, San Francisco, CA, Jan 28, 2018.
32. Q. Wei, "A Colorimetric Microplate Reader for Point-of-Care ELISA Quantification", *Biological & Chemical Sensors for Healthcare Applications*, ***Biological and Chemical Sensors Summit 2016***, La Jolla, CA, Dec 5-6, 2016.
33. Q. Wei, "A Smartphone Colorimetric Microplate Reader for Point-of-Care ELISA Quantification", *Biodetection Technologies: Point-of-Care for Biodefense*, ***Biodefense World Summit 2016***, Baltimore, MD, Jun 28-29, 2016.
34. B. Berg, B. Cortazar, D. Tseng, Q. Wei, D. Di Carlo, O. B. Garner, and A. Ozcan, "A Smartphone-Based 96-Well Plate Reader for Point-of-Care Quantification of Colorimetric ELISA Tests", ***17th UC Systemwide Bioengineering Symposium***, San Francisco, CA, Jun 13-15, 2016.
35. B. Berg, B. Cortazar, D. Tseng, H. Ozkan, S. Feng, Q. Wei, R. Y. Chan, J. Burbano, Q. Farooqui, M. Lewinski, D. Di Carlo, O. B. Garner, and A. Ozcan, "A Smartphone-Based Microplate Reader for Point-of-Care ELISA Quantification," *Medical Screening & Applications*, ***CLEO 2016***, San Jose, CA, June 5-10, 2016.
36. Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan, "Single DNA Imaging and Length Quantification Through a Mobile-Phone Microscope", *Optics and Biophotonics in Low-Resource Settings*, ***SPIE Photonics West***, San Francisco, CA, Feb 13-18, 2016.
37. B. Berg, B. Cortazar, D. Tseng, H. Ozkan, S. Feng, Q. Wei, R. Y. Chan, J. Burbano, Q. Farooqui, M. Lewinski, D. Di Carlo, O. B. Garner, and A. Ozcan, "Cellphone-Based Colorimetric Microplate Reader for Point-of-Care Testing," *Optics and Biophotonics in Low-Resource Settings*, ***SPIE Photonics West***, San Francisco, CA, Feb 13-18, 2016.
38. Q. Wei, W. Luo, S. Chiang, T. Kappel, N. Nguyen, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan. "Mobile Phone Fluorescence Microscopy for Single DNA Imaging and Sizing", ***2016 UCLA EE Annual Research Review***, Los Angeles, CA, Feb 19, 2016.
39. Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, A. Ozcan, "Mobile-Phone Based Microscopy for Imaging and Sizing of Single DNA Molecules", *Biomedical Imaging and Optics*, ***2015 BMES Annual Meeting***, Tampa, FL, Oct 7-10, 2015.
40. Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan, "Field-Portable Smartphone Microscopy Platform for Wide-Field Imaging and Sizing of Single DNA Molecules", *Clinical Technologies and Systems II*, ***CLEO 2015***, San Jose, CA, May 12-14, 2015.

41. Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, N. Nguyen, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan, "3D Printed Microscopy on a Mobile-Phone for Imaging and Sizing of Single DNA Molecules", ***16th UC Systemwide Bioengineering Symposium***, Santa Cruz, CA, Jun 22-24, 2015.
42. Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan, "Mobile-Phone Based Microscopy for Imaging and Sizing of Single DNA Molecules", *Emerging Technologies for Disease & Biomedical Applications*, ***the 249th ACS National Meeting***, Denver, CO, Mar 22-26, 2015.
43. Q. Wei, R. Nagi, K. Sadeghi, S. Feng, E. Yan, S J. Ki, R. Caire, D. Tseng, and A. Ozcan, "Smartphone Based Spatiotemporal Mapping of Mercury(II) Ions Using a Colorimetric Gold Nanoparticle Assay", *Optics and Biophotonics in Low-Resource Settings*, ***SPIE Photonics West***, San Francisco, CA, Feb 7-12, 2015.
44. Q. Wei, R. Nagi, K. Sadeghi, S. Feng, E. Yan, S J. Ki, R. Caire, D. Tseng, and A. Ozcan, "Quantitative Mercury Sensing and Spatiotemporal Mapping Using a Smartphone", *Biomedical Imaging and Optics,* ***2014 BMES Annual Meeting***, San Antonio, Texas, Oct 22-25, 2014.
45. Z. Göröcs, Y. Ling, M. Yu, D. Karahalios, K. Mogharabi, K. Lu, Q. Wei, and A. Ozcan, "Ultra-Wide Field-Of-View Gigapixel Fluorescent Imaging System Using a Modified Flatbed Scanner", *Biomedical Imaging and Optics,* ***2014 BMES Annual Meeting***, San Antonio, Texas, Oct 22-25, 2014.
46. Q. Wei and A. Ozcan, "Smartphone-Based Imaging Devices for Nano-Object and Small Molecule Detection in Resource-Limited Settings", ***IEEE Global Humanitarian Technology Conference (GHTC)***, San Jose, CA, Oct 10-13, 2014.
47. Q. Wei, H. Qi, W. Luo, D. Tseng, L. A. Bentolila, T.-T. Wu, R. Sun, and A. Ozcan, "Smartphone-Based Microscopy for Imaging of Single Fluorescent Nanoparticles and Viruses", ***15th UC Systemwide Bioengineering Symposium***, Irvine, CA, Jun 18-20, 2014.
48. Q. Wei, R. Nagi, K. Sadeghi, S. Feng, D. Tseng, and A. Ozcan, "Spatiotemporal Mapping of Mercury Contamination using a Smartphone", ***15th UC Systemwide Bioengineering Symposium***, Irvine, CA, Jun 18-20, 2014.
49. Q. Wei, H. Qi, W. Luo, D. Tseng, L. A. Bentolila, T.-T. Wu, R. Sun, and A. Ozcan. "Single Nanoparticle and Virus Detection Using a Smart Phone Based Fluorescence Microscope", *Microscopy*, ***CLEO 2014***, San Jose, CA, Jun 8-13, 2014.
50. Z. Göröcs, Y. Ling, M. Yu, D. Karahalios, K. Mogharabi, K. Lu, Q. Wei, and A. Ozcan, "Fluorescent Flatbed Scanner: An Ultra-Large Field-of-View Gigapixel Fluorescent Imaging System", ***15th UC Systemwide Bioengineering Symposium***, Irvine, CA, Jun 18-20, 2014.
51. Q. Wei, E. McLeod, H. Qi, Z. Wan, R. Sun, and A. Ozcan. "Plasmonic Nanoparticle-Enhanced Lensfree Holographic Cytometry", *Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications X*, ***SPIE Photonics West***, San Francisco, CA, Feb 1-6, 2014.
52. Q. Wei and A. Ozcan. "Smart Phone Microscopy for Imaging of Single Fluorescent Nanoparticles and Viruses", ***2013 UCLA EE Annual Research Review***, Los Angeles, CA, Dec 11, 2013.
53. Q. Wei, E. McLeod, H. Qi, Z. Wan, R. Sun, and A. Ozcan. "Lensfree Holographic Cytometry Using Plasmonic Nanoparticles", *Optical Imaging and Cytometry*, ***IEEE Photonics Conference (IPC)***, Bellevue, WA, Sep 8-12, 2013.
54. Q. Wei, E. McLeod, H. Qi, Z. Wan, R. Sun, and A. Ozcan. "Lensfree Holographic Cytometry Using Plasmonic Nanoparticles", ***14th UC Systemwide Bioengineering Symposium***, San Diego, CA, Jun 19-21, 2013.
55. Q. Wei, H.-M. Song, Q. K. Ong, K. Ritchie, and A. Wei. "Gold Nanostars with Magnetic Cores for Dynamic Optical Contrast", *Advances in Nanomedicine 2008*, ***the 236th ACS National Meeting***, Philadelphia, PA, Aug 18, 2008.

Conference Posters:

1. Q. Wei. “Point-of-Care and Plant Diagnostics by Connected Smartphone Sensors”, *Bioengineering for Global Health*, *Nature Conferences*, Nashville, TN, Nov 14, 2023.
2. J. Kolbe, Z. Hetzler, and Q. Wei, “Scalable Expression of LbCas12a in Escherichia Coli”, *2023 AIChE Annual Meeting*, Orlando, FL, Nov 7, 2023.
3. N. Mohammad, L. Talton, S. Dalgan, and Q. Wei, "Nonfluorescent Ratiometric Sensing Utilizing CRISPR-Cas12a-Induced DNA Supercoil Relaxation", *2023 AIChE Annual Meeting*, Orlando, FL, Nov 6, 2023.
4. S. Jamalzadegan, G. Lee, O. Hossain, and Q. Wei, “Machine Learning for Sensor Data Integration and Quantitative Early Detection of Plant Diseases”, *2023 Schoenborn Graduate Research Symposium*, Raleigh, NC, Oct 3, 2023.
5. J. Kolbe, Z. Hetzler, and Q. Wei, “Scalable Expression of LbCas12a in Escherichia Coli”, *2023 Schoenborn Graduate Research Symposium*, Raleigh, NC, Oct 3, 2023.
6. O. Hossain, Y. Wang, M. Li, S. Jamalzadegan, N. Mohammad, A.D. Poonam, and Q. Wei, “A Dual-Functional Needle-Based VOC Sensing Technology for Rapid Vegetable Variety Categorization”, *Sensors, Biosystems & Analytics Converge*, *Institute for Connected Sensor-Systems (ICONS)*, Raleigh, NC, Sep 28, 2023.
7. S. Jamalzadegan, G. Lee, and Q. Wei, "Machine Learning for Sensor Data Integration and Quantitative Early Detection of Plant Diseases", *Sensors, Biosystems, & Analytics Converge*, *Institute for Connected Sensor-Systems (ICONS)*, Raleigh, NC, Sep 28, 2023.
8. S. Jamalzadegan, M. Bradley, P. Rhyne, and Q. Wei, "Multi HIV-1 RNA Targets Detection Using CRISPR/Cas13", *Emerging & Infectious Diseases, Research, Education & Innovation Summit of Comparative Medicine Institute (CMI) 2023*, NC State, Aug 17, 2023.
9. N. Mohammad, L. Talton, Z. Hetzler, M. Gongireddy, and Q. Wei, "CRISPR-Cas12a-based unidirectional trans-cleaving of dsDNA substrate with toeholds", *ACS Fall 2023 National Meeting*, San Francisco, CA, Aug 15, 2023.
10. S. Jamalzadegan, G. Lee, and Q. Wei, "Machine Learning for Sensor Data Integration and Quantitative Early Detection of Plant Diseases", *Foundations of Process/product Analytics and Machine learning (FOPAM) 2023*, UC Davis, CA, Aug 1, 2023.
11. J. Kolbe, Z. Hetzler, and Q. Wei, “Scalable Expression of LbCas12a in Escherichia Coli”, *NC State Undergraduate Research & Creativity Symposium 2023*, NC State, July 27, 2023.
12. M. Bradley, S. Jamalzadegan, and Q. Wei, "Multi HIV-1 RNA Targets Detection Using CRISPR/Cas13", *NC State Undergraduate Research & Creativity Symposium 2023*, NC State, July 27, 2023.
13. Q. Wei. “PC4.1-116: Molecular Chip Device for Rapid AAV Vector Genome and Empty Capsid Quantitation”, *2023 NIIMBL Annual Meeting*, Washington DC, Jun 29, 2023.
14. O. Hossain, Z. Li, G. Lee, S. Jamalzadegan, Y. Liu, R Paul, A.C. Saville, T. Shymanovitch, D. Rotenberg, A.E. Whitfield, J.B. Ristaino, Y. Zhu, and Q. Wei, “Revolutionizing Plant Pathogen Detection and Monitoring: Portable VOC Fingerprinting and Continuous Monitoring in Agriculture”, *Predicting the Next Plant Disease Pandemic Symposium 2023*, Raleigh, NC, Apr 5, 2023.
15. Z. Hetzler, “Flexible Sensor Patch for Continuous Carbon Dioxide Monitoring”, *2022 Schoenborn Graduate Research Symposium*, Raleigh, NC, Oct 31, 2022.
16. S. Zhang, “A Digital Plasmonic Serological Assay for COVID-19 Diagnosis”, *2021 Fall Schoenborn Graduate Research Symposium*, Raleigh, NC, Sep 28, 2021.
17. Y. Wang, P. C. Kannan, Z. Hetzler, D. Krafft, L. Overton, G. Gilleskie, B. Rao, G. Dong, J.-M. Bielser, M. Kudenov, J. Genzer, F. S. Ligler, and Q. Wei. “A Multivariate In-Line Optochemical Sensor Platform for Continuous Monitoring of Cross-Category Process Parameters and Product Attributes in Bioreactors”, *2021*

NIIMBL Annual Meeting, Virtual, Jul 14-16, 2021.

18. R. Paul, "Microneedle-Based Rapid Plant DNA Extraction: Towards In-Field Detection of Plant Pathogens", *2020 Spring Schoenborn Graduate Research Symposium*, Raleigh, NC, Jan 27, 2020.
19. Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, R. Y. L. Chan, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan. "Imaging and Sizing of Single DNA Molecules on a Mobile Phone", *2016 International Symposium on Nanobiotechnology*, Los Angeles, CA, Feb 3-5, 2016.
20. Q. Wei, W. Luo, S. Chiang, and A. Ozcan, "Mobile-Phone Based Microscopy for Imaging and Sizing of Single DNA Molecules", *2015 UC Global Health Day*, Los Angeles, CA, April 18, 2015.
21. Q. Wei, T.-C. Lee, E. Appel, H.-M. Song, O. A. Scherman, and A. Wei. "Supramolecular Control over the Gyromagnetic Activity of Gold Nanostars", *Supramolecular Nanoparticles*, *the 248th ACS National Meeting*, San Francisco, CA, Aug 10-14, 2014.
22. B. S. Beikmann, S. C. Altieri, P. R. Moya, Q. Wei, A. Ozcan, D. L. Murphy, A. F. Leuchter, and A. M. Andrews. "Serotonin Transporter Function in Peripheral Blood Cells as a Biomarker for Depression Treatment Responsiveness", *43rd Annual Meeting of the Society for Neuroscience*, San Diego, CA, Nov 9-13, 2013.
23. Q. Wei, T.-C. Lee, E. Appel, H.-M. Song, O. A. Scherman, and A. Wei. "Neurochemically Gated Activity of Gyromagnetic Nanostars", *Supramolecular Nanomaterials*, *the 246th ACS National Meeting*, Indianapolis, IN, Sep 8-12, 2013.
24. V. Crecea, B. Graf, Q. Wei, H.-M. Song, A. Wei, and S. Boppart. "High Resolution Phase-Sensitive Optical Coherence Microscopy Tracking of Magnetic Microbeads for Cellular Mechanics", Novel Instrumentation and measurements for Biomedical Research, *APS March Meeting 2012*, Boston, MA, Feb 27, 2012.
25. Q. Wei, H.-M. Song, and A. Wei. "Magnetomotive Imaging of Plasmon-Resonant Nanoparticles and Nanostars in Tumor Cells and Macrophages", *PACIFICHEM 2010*, Honolulu, HI, Dec 15-20, 2010.
26. Q. Wei, H.-M. Song, and A. Wei. "Magnetomotive Imaging of Plasmon-Resonant Nanoparticles and Nanostars in Tumor Cells and Macrophages", *2010 Turkey Run Analytical Chemistry Conference*, Marshall, IN, Nov 5-6, 2010.
27. H.-M. Song, Q. K. Ong, Q. Wei, and A. Wei. "Synthesis and Cell Uptake of Gold Nanostars with Magnetic Cores", Biological Imaging and Sensing Using Nanoparticle Assemblies, *2009 MRS Fall Meeting*, Boston, MA, Dec 1, 2009.
28. Q. Wei, H.-M. Song, A. P. Leonov, K. Ritchie, and A. Wei. "Gyromagnetic Imaging using Gold Nanostars with Magnetic Cores", Biological Imaging and Sensing Using Nanoparticle Assemblies, *2009 MRS Fall Meeting*, Boston, MA, Dec 3, 2009.
29. Q. Wei, J. Ji, and J. Shen, "Photothermally Responsive Gold Nanorod/PNIPAAm Hybrids", *ChinaNANO 2007*, Beijing, China, June 4-6, 2007.

MENTORING AND HOSTING

1. **Mentor for Research/Postdoctoral Fellows** (6 total; 2 co-advised)
   1) Dr. Mingzhuo Li (2022-present)
   2) Dr. Yan Wang (2020-2023), co-advised with Frances Ligler (BME)
   3) Dr. Rajesh Paul (2021-2022)
   4) Dr. Giwon Lee (2020-2022), co-advised with Yong Zhu (MAE)
   5) Dr. Tao Yu (2017-2021)
   6) Dr. Zheng Li (2018-2019)

2. **Mentor for PhD Students (**13 total; 1 co-advised**)**
   1) Belinda Mativenga (2023-present)

2) Mahsa Bagi (2023-present)
3) Mohammadreza Zare (2022-present, co-advised with Michael Dickey)
4) Selen Dalgan (2022-present)
5) Alireza Velayati (2022-present)
6) Aditi Dey Poonam (2022-present)
7) Sina Jamalzadegan (2021-present)
8) Zach Hetzler (2020-present)
9) Lydia Skolrood (2020-present)
10) Oindrila Hossain (2019-present)
11) Noor Mohammad (2019-present)
12) Shengwei Zhang (2018-present)
13) Rajesh Paul (2017-2021)

3. **PhD Committee Member**
   1) Sina Sadeghi (CBE, 2023-present)
   2) Sooyoung Kim (CBE, 2023-present)
   3) Hamed Morshedian (CBE, 2022-present)
   4) Mariam Sohail (CBE, 2021-present)
   5) Abbas Ghaffariesfehani (Phy, defended in 2022)
   6) Zidan Li (CBE, 2021-present)
   7) Katie Kilgour (CBE, defended in 2023)
   8) John Polo (Geospatial Analytics, 2021-present)
   9) Amanda Mainello (EPP, 2021-present)
   10) Andrew Clark (CBE, defended in 2023)
   11) Tamoghna Saha (CBE, defended in 2022)

4. **Mentor for MS Students**
   1) Preston Rhyne (CBE, 2023-)
   2) Mann Verlekar (CBE, 2023-)
   3) Noah Lott (CBE, 2021-2023)
   4) Sree Harshita Valli Koduri (CBE, 2021-2023)
   5) Monica Harshad Rathod (CBE, 2021-2023)
   6) Shrinivas Siddhivinayak Katkam (CBE, 2021-2023)

5. **MS Committee Member**
   1) Aditya Sapre (CBE, 2019-2021)
   2) Karthik Suresh Arulalan (CBE, 2019-2020)
   3) Amita Vijayanand Pai (CBE, 2019-2020)

6. **Research Mentor for Undergraduates (>40)**
   1) Leyao Huang (ChE, 2024-)
   2) Anastasiia Steksova (ChE, 2024-/CHE 497)
   3) Ariana Gomez (ChE, 2024-/CHE 497)
   4) Jenna Kolbe (ChE, 2023-/CHE 497)
   5) Aidan Sunris (ChE, 2023/CHE 497)
   6) John Vargas (ChE, 2023/CHE 497)
   7) Ethan Pardieum (ECE, 2023)
   8) Jasmine Newman (ChE, 2023/CHE 497)
   9) Morgan Bradley (ChE, 2023/CHE 497)
   10) Sumeetha Jagadeesan (ChE, 2023/CHE 497)
   11) Logan Talton (ChE, 2023/CHE 497)

12) Delaney Fields (ChE, 2022/CHE 497)
13) Lauren Turrentine (ChE, 2022)
14) Megha Gongireddy (ChE, 2022)
15) Natalie Kelmer (ChE, 2021/CHE 497)
16) Sashank Sabbineni (ChE, 2021)
17) Sierra Gnecco (ChE, 2021)
18) Zhiming Dai (Computer Engineering, 2019)
19) James Caleb Nitka (ChE, 2018/CHE 497)
20) Emily Ostermann (ChE, 2018-2022/CHE 497)
21) Sandy Trinh (ChE, 2018)
22) Zach Schwartz (ChE, 2018-19/CHE 497)
23) William Marx (ChE, 2018-20)
24) Carmin Ball (ChE, 2018/CHE 497)
25) Shaoqing Wan (ChE, 2018/CHE 497)
26) Matthew Traenkle (BME, 2018)
27) Amy William (ChE, 2018/CHE 497)
28) Jessica Jones (ChE, 2018/CHE 497)
29) Amy Halbing (BS, 2017-2019)
30) Jake Oros (ChE, 2018)
31) Justine Happel (BME, 2018)
32) Robert Ellwanger (EE, 2017-2018)
33) Jacob Brightmeyer (ChE, 2017-2021/CHE 497)
34) Alexandra Bryant-Boose (ChE, 2017-2018/CHE 497)
35) Taleb Ba Tis (MSE, 2017-2018)
36) Michael Iasiello (BME, 2017-2018)
37) Alyssa Williams (ChE, 2017-2018)
38) Jennifer Arkin (BME, 2017-2018)
39) Zach Watkins (BME, 2017)
40) Stephanie Few (BME, 2017)
41) Nicole Spencer (BME, 2017)
42) Davis Hudson (BAE, 2017)

7. Research Mentor for Exchange/Visiting Students

GEAR Program:
1) Jingyuan Fan (ZJU, Summer 2019)
2) Yuming Yang (NTU, Summer 2019)
3) Xin Zhao (BIT, Summer 2018)
4) Tian Qin (Jilin Univ, Summer 2018)
5) Jiaqi Wu (Jilin Univ, Summer 2017)
6) Ying Tan (ZJU, Summer 2017)
7) Wanru Li (Jilin Univ, Summer 2017)

KGSP Program:
1) Yazid Alamry, 2018
2) Saleh Qaryan, 2018

Visiting Undergraduate Students:
1) Xinyuan Chang, 2018

8. Research Mentor for High School Students:
1) Sam Nguyen, NC School of Science and Mathematics (NCSSM) Mentorship Program, 2023-24

2) Maddy Bowers, NC School of Science and Mathematics (NCSSM) Mentorship Program, 2023-24
3) Clare Lee, Cary Academy, 2023
4) Tracy Huang, Green Hope High School, Cary NC, 2022
5) Razvan Matei, NC School of Science and Mathematics (NCSSM) Mentorship Program, 2019-20
6) Joshua Greene, Wake Young Men's Leadership Academy, ACS Project Seed Program, 2018

9. Visiting Scholars

1) Prof. Dharitri Rath (IIT Jammu), 2022
2) Prof. Jianfeng Zhang (Ningbo University), 2020