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Engineering & Scientific Consulting

Chongyue Yi, Ph.D.

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Professional Profile

Dr. Chongyue Yi has expertise focused on machine learning, data science, computer vision, optics, and semiconductors. Dr. Yi has extensive experience in applying machine learning techniques to solve real-world problems for clients. He has created machine learning and computer vision solutions in a wide variety of sectors, including utilities, retail, and consumer electronics.

Dr. Yi's programming language experience includes Python, MATLAB, SQL, C, C#, JMP, and LabView.

Prior to joining Exponent, Dr. Yi worked as Technology Development Engineer in the lithography module of Intel, where he provided Design of Experiments (DOE), New Product Introduction (NPI) and Statistical Process Control (SPC) in advanced chip manufacturing and development processes.

Dr. Yi received his Ph.D. degree at Florida State University in 2015, followed by postdoctoral training at Rice University. His research focused on laser spectroscopy, optics, microscopy, and nanotechnology.

Academic Credentials & Professional Honors

Ph.D., Chemistry, Florida State University, 2015

B.S., Chemistry, Huazhong University of Science and Technology, 2009

B.S., Finance, Wuhan University of Technology, 2009

Prior Experience

Technology Development Engineer, Intel Corp., 2018-2021

Postdoctoral Research Fellow, Rice University, 2015-2018

Professional Affiliations

American Chemical Society (ACS), Member

SPIE, Member

Languages

Mandarin Chinese

English

Publications

P. Herbert*, C. Yi*, S. W. Compel, C. J. Ackerson, K. L. Knappenberger, "Relaxation dynamics of electronically coupled Au₂₀(SC₈H₉)₁₅-n-glyme- Au₂₀(SC₈H₉)₁₅ monolayer-protected cluster Dimers", J. Phys. Chem. C, 2018, 122 (33), 19521-19258.

C. Yi, M.-N. Su, P. Dongare, D. Chakraborty, Y.-Y. Cai, D. M. Marolf, R. N. Kress, B. Ostovar, L. J. Tauzin, F. Wen, W.-S. Chang, M. R. Jones, J. E. Sader, N. J. Halas, S. Link, "Polycrystallinity of lithographically fabricated plasmonic nanostructures dominates their acoustic vibrational damping", Nano Lett., 2018, 18 (6), 3494–3501.

C. Yi, P. Dongare, M.-N. Su, W. Wang, D. Chakraborty, F. Wen, W.-S. Chang, P. Nordlander, J. E. Sader, N. J. Halas, S. Link, "Vibrational coupling in plasmonic molecules", Proc. Natl. Acad. Sci. U.S.A., 2017, 144(44), 11621-11626.

C. Yi, H. Zheng, P. Herbert, Y. Chen, R. Jin, K. L. Knappenberger, "Ligand- and solvent-dependent electronic relaxation dynamics of Au₂₅(SR)₁₈- monolayer-protected clusters", J. Phys. Chem. C, 2017, 121(44), 24894–24902.

C. Yi, K. L. Knappenberger, "The influence of surface passivation on electronic energy relaxation dynamics of CdSe and CdSe/CdS nanocrystals studied using visible and near infrared transient absorption spectroscopy", Nanoscale, 2015, 7 (13), 5884-5891.

C. Yi, H. Zheng, L. M. Tvedte, C. J. Ackerson, K. L. Knappenberger, "Nanometals: identifying the onset of metallic relaxation dynamics in monolayer-protected gold clusters using femtosecond spectroscopy", J. Phys. Chem. C, 2015, 119 (11), 6307- 6313.

C. Yi, M. A. Tofanelli, C. J. Ackerson, K. L. Knappenberger, "Optical properties and electronic energy relaxation of metallic Au₁₄₄(SR)₆₀ nanoclusters", J. Am. Chem. Soc., 2013, 135(48), 18222-18228.

Peer Reviews

Digital Discovery

Nanoscale

Physical Chemistry Chemical Physics

Chemical Communications

Journal of Materials Chemistry C

Journal of Chemical Physics

Materials Science and Engineering: B

Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy

Journal of Nanoscience and Nanotechnology

