



LIU Xia

Associate Professor

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BIO

Education

- **PhD**, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Analytical Chemistry (2016)
- **B.S.**, Sichuan Normal University, Chemistry (2010)

Employment

Academic Appointments

- Associate Professor, School of Life Science and Engineering, Southwest Jiaotong University, China (2019-present)

RESEARCH INTERESTS

surface modification, biosensors and single-molecule mechanics

SELECTED PUBLICATIONS

Principal Publications of the Last Five Years

- Xia Liu, Rongrong Tian, Jiaxue Gao, Dianjun Liu, Zhenxin Wang*. Multiplexed detection of microRNAs by a competitive DNA microarray-based resonance light scattering assay. *Analyst*, 2017, 142(23): 4529-4535.
- Xia Liu, Rongrong Tian, Dianjun Liu, Zhenxin Wang*. Development of sphere-polymer brush hierarchical nanostructure substrates for fabricating microarrays with high performance. *ACS Applied Materials & Interfaces*, 2017, 9(43): 38101-38108.
- Jianwen Hou, Margarita Vázquez-González, Michael Fadeev, Xia Liu, Ronit Lavi, Itamar Willner*. Catalyzed and electrocatalyzed oxidation of L-tyrosine and L-phenylalanine to dopachrome by nanozymes. *Nano letters* 2018. 18(6): 4015-4022.
- Zhixin Zhou‡, Xia Liu‡, Liang Yue, Itamar Willner*. Controlling the catalytic and optical properties of aggregated nanoparticles or semiconductor quantum dots using DNA-based constitutional dynamic networks. *ACS Nano*, 2018, 12(11): 10725-10735.
- Chen Wang‡, Xia Liu‡, Verena Wulf, Margarita Vázquez-González, Michael Fadeev, Itamar Willner*. DNA-based hydrogels loaded with Au nanoparticles or Au nanorods: thermoresponsive plasmonic matrices for shape-memory, self-healing, controlled release and mechanical applications. *ACS Nano*, 2019, 13(3): 3424-3433.

- Asaf Shoval‡, Amos Markus‡, Zhixin Zhou‡, Xia Liu‡, Rémi Cazelles, Itamar Willner*, Yossi Mandel*. Anti-VEGF-Aptamer modified C-Dots-A hybrid nanocomposite for topical treatment of ocular vascular disorders. *Small*. 2019, 15, 1902776.
- Xia Liu‡, Junji Zhang‡, Michael Fadeev, Ziyuan Li, Verena Wulf, He Tian, Itamar Willner*. Chemical and photochemical DNA “gears” reversibly control stiffness, shape-memory, self-healing and controlled release properties of polyacrylamide hydrogels. *Chemical Science*. 2019, 10(4): 1008-1016.
- Jianwen Hou‡, Xia Liu‡, Shaobing Zhou*. Programmable materials for efficient CTCs isolation: From micro/nanotechnology to biomimicry. *View*, 2021, DOI:10.1002/VIW.20200023.

TEACHING

Primary Teaching areas

- biosensors
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Current Courses

- Biological frontiers and research methods
- Biomedical Frontiers