

## Researcher Information Form

**Name: Donglu Shi**

**Department/Division/College: Mechanical and Materials Engineering/College of Engineering and Applied Science**

Room/Address: 493 Rhodes Hall, The Materials Science and Engineering Program, Dept. of Mechanical and Materials Engineering, College of Engineering and Applied Science, University of Cincinnati, Cincinnati, OH. 45221-0072

Phone: 513 556 3100

Email: donglu.shi@uc.edu

### **Research Interest (1-2 Sentences):**

Nano medical diagnosis and therapeutics, magnetic hyperthermia, photothermal therapy, detection of circulating tumor cells (CTC), medical imaging, gene/drug delivery, precision medicine

### **Unique Resources/Techniques:**

Electrically-charged nanoprobe for CTC detection and magnetic separation, design of nano vectors for drug/gene delivery, multifunctional nanoparticles for medical imaging and cell targeting.

### **Representative Publications (5 Maximum, May use Hyperlink):**

1. Zicheng Deng, Jou Lin, Sergey L. Bud'ko, Brent Webster, Tanya V. Kalin, Vladimir V. Kalinichenko and Donglu Shi, *Cancers*, Dual targeting with cell surface electrical charge and folic acid via superparamagnetic Fe<sub>3</sub>O<sub>4</sub>@Cu<sub>2</sub>-xS for photothermal cancer cell killing, *Cancers* 2021, 13, 5275. <https://doi.org/10.3390/cancers13215275>

2. Zicheng Deng, Gregory T. Kalin, Donglu Shi, and Vladimir V. Kalinichenko, "Nanoparticle Delivery Systems with Cell-specific Targeting for Pulmonary Diseases," *American Journal of Respiratory Cell and Molecular Biology*, <https://doi.org/10.1165/rcmb.2020-0306TR> (2020)

3. K. Wang, Shuman Wen, Lianghua He, Ang Li, Yan Li, Haiqing Dong, Wei Li, Tianbin Ren, Donglu Shi, and Yongyong Li, "Minimalist" Nanovaccine Constituted from Near Whole Antigen for Cancer Immunotherapy," *ACS nano*, 12, no. 7: 6398-6409 (2018)

4. Yan Li, Lianghua He, Haiqing Dong, Yiqiong Liu, Kun Wang, Ang Li, Tianbin Ren, Donglu Shi, and Yongyong Li, "Fever-Inspired Immunotherapy Based on Photothermal CpG Nanotherapeutics: The Critical Role of Mild Heat in Regulating Tumor Microenvironment" *Advanced Science*, DOI: 10.1002/advs.201700805 (2018)

5. Shengming Wu, Lei Gu, Jingwen Qin, Lei Zhang, Fenyong Sun, Zhongchen Liu, Yilong Wang, and Donglu Shi, "Rapid Label-Free Isolation of Circulating Tumor Cells from Patients' Peripheral Blood Using Electrically Charged Fe<sub>3</sub>O<sub>4</sub> Nanoparticles," *ACS Appl. Mater. Interfaces*.12, 4193–4203 (2020)