



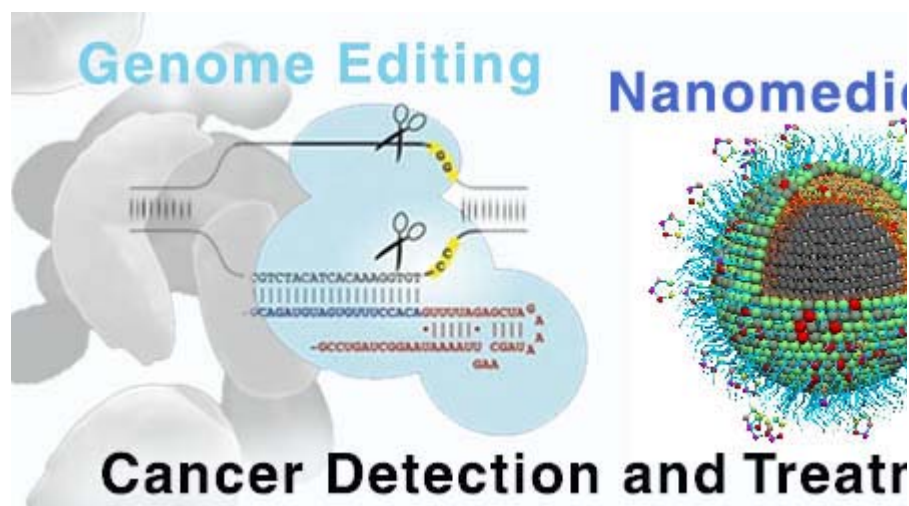
[Rice](#) / [Bioengineering](#) / Sheng Tong, Ph.D.



Sheng Tong, Ph.D.

Associate Research Professor

Laboratory of Biomolecular Engineering and Nanomedicine



Bio Sketch

Sheng Tong develops nanotechnologies for the early detection and many other human diseases. Currently, his research in Biomolecular Engineering and Nanomedicine focuses on the development of a versatile nanomaterial that can be used for in vitro diagnosis and remote control of biological processes.

Iron oxide nanoparticles (IONPs) are composed of wüstite nanometers in diameter. In particular, magnetic iron oxide can produce strong T2 signals in magnetic resonance imaging of various disease processes. MNPs can be heated; this feature has been extensively explored for cancer hyperthermia. With bulk magnets, MNPs experience a force in external magnetic fields, which provides a means for magnetic targeting of therapeutic agents.



Education

Postdoctoral Fellow,
Biomedical Engineering,
University of California at
San Diego (2003-2006)

Ph.D., Biomedical
Engineering, Duke
University (2003)

M.S., Mechanical
Engineering, Peking
University (1998)

B.S., Mechanical
Engineering, University of

Working in the Bao lab, Tong studied fundamental biophysics and developed novel methods for synthesizing block copolymers. The package includes software for elucidating the mechanisms of magnetic mobility. Combining this with work toward using MNPs to improve drug delivery. Examples include loading MNPs for hyperthermia and chemophotothermal therapy. To engineer MNPs for more effective drug delivery.

Prior to his research at Rice, Tong was at the Wallace H. Coulter Department of Biomedical Engineering, Institute of Technology. He received the Excellence in Nanotechnology Award from the Cardiovascular Nanomedicine Center.

Tong has a doctorate degree in Biomedical Engineering from Professor Fan Yuan's research group, studying the mechanisms of molecular drug delivery to solid tumors.

Science and Technology of
China (1995)