

Stanislav Emelianov, Ph.D.

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Stanislav (Stas) Emelianov received B.S. and M.S. degrees in physics and acoustics in 1986 and 1989, respectively, and a Ph.D. degree in physics in 1993 from Moscow State University, Russia. In 1989, he joined the Institute of Mathematical Problems of Biology of Russian Academy of Sciences, where he was engaged in both mathematical modeling of soft tissue biomechanics and experimental studies of noninvasive visualization of tissue mechanical properties. Following his graduate work, he moved to the University of Michigan, Ann Arbor, as a post-Doctoral Fellow in the Bioengineering Program and Electrical Engineering and Computer

Science Department. From 1996 to 2002, Dr. Emelianov was a Research Scientist at the Biomedical Ultrasonics Laboratory at the University of Michigan. While at Michigan, Dr. Emelianov was involved primarily in the theoretical and practical aspects of elasticity imaging. In 2002, Dr. Emelianov moved to The University of Texas at Austin where he is currently an Associate Professor and an Associate Chair for Research in the Department of Biomedical Engineering. In addition, Dr. Emelianov is an Adjunct Associate Professor at the University of Texas M.D. Anderson Cancer Center in Houston. Since his tenure at the University of Texas at Austin, Dr. Emelianov has formed the Ultrasound Imaging and Therapeutics Research Laboratory – home to research projects in medical imaging, therapeutics and nanobiotechnology. Dr. Emelianov’s research interests are in the areas of medical imaging for diagnostic and therapeutic applications, laser-tissue interaction, photoacoustic imaging, ultrasound imaging, elasticity imaging, cellular/molecular imaging, and functional imaging. Dr. Emelianov is an author of more than 200 journal and conference referred papers. Throughout his career, he has mentored and served on dissertation committees of more than 50 graduate students. Finally, Dr. Emelianov is active in several professional organizations including the Institute of Electrical and Electronic Engineers (IEEE) and the Society of Photo-Optical Instrumentation Engineers (SPIE).

Representative Publications (selected, last 12 months):

- M. Qu, S. Mallidi, M. Mehrmohammadi, R. Truby, K. Homan, P. Joshi, Y.-S. Chen, K. Sokolov, and S. Emelianov, “Magneto-photo-acoustic imaging,” *Biomedical Optics Express*, 2(2), 386–396 (2011)
- Y.-S. Chen, W. Frey, S. Kim, P. Kruizinga, K. Homan, and S. Emelianov, “Silica-coated gold nanorods as photoacoustic signal nanoamplifiers,” *Nano Letters* 11 (2), 348–354 (2011)
- K.A. Homan, J. Chen, A. Schiano, M. Mohamed, K.A. Willets, S. Murugesan, K.J. Stevenson, and S. Emelianov, “Silver-polymer composite stars: synthesis and applications,” *Advanced Functional Materials*, 21(9):1673–1680 (2011)
- J.L. Su, R.R. Bouchard, A.B. Karpouk, J.D. Hazle, and S.Y. Emelianov “Photoacoustic imaging of prostate brachytherapy seeds”, *Biomedical Optics Express* 2(8), 2243-2254 (2011)
- B. Wang and S. Emelianov, “Thermal intravascular photoacoustic imaging,” *Biomedical Optics Express*, 2(11), 3072-3078 (2011)
- S. Kim, Y.-S. Chen, G.P. Luke and S.Y. Emelianov, “In vivo three-dimensional spectroscopic photoacoustic imaging for monitoring nanoparticle delivery,” *Biomedical Optics Express*, 2(9), 2540-2550 (2011)
- Y.-S. Chen, W. Frey, S. Aglyamov and S. Emelianov, “Environment-dependent generation of photoacoustic waves from plasmonic nanoparticles,” *Small*, 8(1), 47–52 DOI: 10.1002/smll.201101140 (2012)
- K.A. Homan, M. Souza, R. Truby, G.P. Luke, C. Green, E. Vreeland, S. Emelianov, “Silver nanoplate contrast agents for in vivo molecular photoacoustic imaging,” *ACS Nano*, DOI: 10.1021/nn204100n (2011)
- K. Wilson, K. Homan and S. Emelianov, “Biomedical photoacoustics beyond thermal expansion using triggered nanodropletsaporization for contrast-enhanced imaging,” *Nature Communications*, DOI: 10.1038/ncomms1627 (2012)