

**BIOGRAPHICAL SKETCH**

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NAME Wei Tan	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME (credential, e.g., agency login) WEITAN			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
East China University of Science and Technology	B.S.	7/1997	Chemical & Biochemical Engineering
University of Illinois at Chicago	M.S.	7/2001	Bioengineering
University of Illinois at Chicago	Ph.D.	12/2002	Bioengineering
University of Illinois at Urbana-Champaign	Post-Doc	3/2003-8/2005	Bioimaging and Biomolecular & Chemical Engineering

**A. POSITIONS AND HONORS****Positions and Employment**

- 3/03 – 8/05 Postdoc Research Associate, Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign, Champaign, IL
- 8/05 – Assistant Professor, Center for Bioengineering, Department of Mechanical Engineering, and Department of Pediatric – Cardiology, University of Colorado

**Awards**

- 2008 DARPA Young Investigator Award (DARPA)
- 2007 Research Institute Scholar Development Award (The Children's Hospital)
- 2006 Junior Faculty Development Award (University of Colorado)
- 2002 Russell & Sigurd Varian Fellowship (American Vacuum Society)
- 2001 Provost's Award (University of Illinois)
- 1996 Jiaohua Excellence Award (Jiaohua Chemical Incorporated)

**B. PEER-REVIEWED PUBLICATIONS****Journal Research Papers (Trainees were underlined)**

1. T. A. Desai; J. Deutsch; D. Motlagh; **W. Tan**; B. Russel. "Microtextured cell culture platforms: biomimetic substrates for the growth of cardiac myocytes and fibroblasts", *Biomedical Microdevices* 2:2, 123-9, 1999
2. **W. Tan**; R. Krishnaraj; T.A. Desai. "Evaluation of nanostructured composite collagen-chitosan matrices for tissue engineering", *Tissue Engineering*, 7:2, 203-210, 2001
3. **W. Tan**; T.A. Desai. "Microfluidic patterning of cells in extracellular matrix biopolymers: Effects of channel size, cell type, and matrix composition on pattern integrity", *Tissue Engineering*, 9:2, 255-267, 2003
4. **W. Tan**; T.A. Desai. "Microfluidic patterning of cellular biopolymer matrices", *JALA (Journal of the Association for Lab Automation)*, 8:3,40-43, 2003
5. **W. Tan**; T.A. Desai. "Microfluidic patterning of cellular biopolymer matrices for biomimetic three-dimensional structures", *Biomedical Microdevices*, 5(3), 235-244, 2003
6. **W. Tan**; T. A. Desai. "Layer-by-layer microfluidics for biomimetic three-dimensional structures", *Biomaterials*, 25, 1355-1364, 2004

7. **W. Tan**; A. Sendemir-Urkmez; J.A. Fahrner; R.D. Jamison; D. Leckband; S.A. Boppart. "Structural and functional optical Imaging of three-dimensional engineered tissue development". *Tissue Engineering*, 10, 1747-1756, 2004
8. **W. Tan**; T. A. Desai. "Microscale multilayer cocultures for biomimetic blood vessels", *Journal of Biomedical Material Research*, 72A(2), 146-160, 2005
9. S. Sharma\*; **W. Tan**\*; T.A. Desai. "Improving the integrity of three-dimensional vascular patterns by poly(ethylene glycol) conjugation". *Bioconjugate Chemistry*, 16, 18-22, 2005
10. H. Ko; **W. Tan**; R. Stack; S.A. Boppart. "Optical coherence elastography of engineered and developing tissue", *Tissue Engineering*, 12: 63-73, 2006
11. C. Vinegoni; T. Ralston; **W. Tan**; W. Luo; D.L. Marks; S.A. Boppart. "Integrated structural and functional optical imaging combining spectral-domain optical coherence and multiphoton microscopy", *Applied Physics Letters*, 88, 053901, 1-4, 2006
12. C.Y. Xu; C. Vinegoni; T. Ralston; W. Luo; **W. Tan**; S.A. Boppart. "Spectroscopic spectral-domain optical coherence microscopy". *Optical Letters*, 31: 1079-1081, 2006
13. **W. Tan**; A. Oldenburg; J. Norman; T. Desai; S.A. Boppart. "Optical coherence tomography of cell dynamics in three-dimensional tissue models". *Optic Express*, 14(16): 7159-7171, 2006
14. **W. Tan**; A. Oldenburg; J. Norman; T. Desai; S.A. Boppart. "Imaging Cellular Responses to Mechanical Stimuli within Three-Dimensional Tissue Constructs" *Microscopy Research and Technique*. 70:361-371, 2007
15. **W. Tan**, **D. Scott**, **D. Belchenko**, J. Qi, L. Xiao. "Development and Evaluation of Microdevices For Studying Anisotropic Biaxial Cyclic Stretch on Cells". *Biomedical Microdevices*, 10 (6): 869-882, 2008
16. **M. Li**, K. Stenmark, R Shandas, **W. Tan**. "Effects of pathologic flow on pulmonary artery endothelial production of vasoactive mediators and growth factors", *Journal of Vascular Research, J Vasc Res* 2009;46:561-571
17. **M. Li**, **D. Scott**, K. Stenmark, R. Shandas, **W. Tan**. "High Pulsatility Flow Induces Adhesion Molecule and Cytokine mRNA Expression in Distal Pulmonary Artery Endothelial Cells" *Ann Biomed Eng*, 37 (6): 1082-1092, 2009
18. **D.J. Guo**, J. Wang, **W. Tan**, S.J. Xiao, Z.D. Dai. "Macro-porous silicon templated from silicon nanocrystallite and functionalized Si-H reactive group for grafting organic monolayer." *Journal of Colloid and Interface Science*, 336: 723-729, 2009
19. **W. Tan**, **J.R. Twomey**, **D.J. Guo**, **K. Madhavan**, **M. Li**. "Evaluation of nanostructural, mechanical and biological properties of collagen-nanotube composites." *IEEE Transactions on Nanobioscience*, in press
20. **K. Madhavan**, **D. Belchenko**, A. Motta, **W. Tan**, "Evaluation of composition and crosslinking effects on collagen-based composite constructs" *Acta Biomaterialia*, 6:4, 1413-1422, 2010

### **Reviews / Chapters in Books**

21. **W. Tan**; T. A. Desai. "Microscale tissue engineering", Encyclopedia of Biomaterials and Biomedical Engineering, New York: Marcel Dekker, Inc., 2004, pp. 1580-1593
22. **W. Tan**; **W. Bonani**; **K. Madhavan**. "Vascular Nanofibrous Constructs", invited book chapter, Nanotechnology in Tissue Engineering and Regenerative Medicine, CRC/Taylor and Francis, 2010

### **Peer-reviewed Mini-papers / Proceedings (Selected from 10+)**

23. **W. Tan**, R. Krishnaraj, T. A. Desai, "Influence of chitosan on cell viability and proliferation in three-dimensional collagen gels", *Proc. IEEE - Engineering in Medicine and Biology*, 2: 1509-1524, 2000
24. L. J. Fahrner, **W. Tan**, C. Vinegoni, T. E. Eurell, S.A. Boppart. "Structural and Functional Imaging of Engineered Tissue Development using an Integrated OCT and Multi-Photon Microscope", *Proc. SPIE*. 5319: 1-10, 2004
25. H. J. Ko, **W. Tan**, R. Stack, S. A. Boppart "Optical coherence elastography of developing biological tissues. Oral presentation and paper", *Proc. SPIE*, 5690: 187-194, 2005
26. **W. Tan**, T. A. Desai, D. A. Leckband, S. A. Boppart "Optical coherence tomography of cell dynamics in three-dimensional engineered tissues", *Proc. SPIE*, 5699: 102-110, 2005
27. S. A. Boppart, **W. Tan**, H. J. Ko, C. Vinegoni, "Optical coherence tomography of cell dynamics in three-dimensional engineered tissues", *Proc. SPIE*, 5861: 193 - 200, 2006