Yong Huang, Associate Professor, Department of Mechanical Engineering/Bioengineering
Clemson University, Clemson, SC 29634-0921, USA
Tel: 864-656-5643, Fax: 864-656-4435, yongh@clemson.edu, http://www.clemson.edu/ces/camsil/

EDUCATION

Ph.D.	Mechanical Engineering	Georgia Institute of Technology, Atlanta, GA	2002
M.S.	Electrical & Computer Engineering	Georgia Institute of Technology, Atlanta, GA	2002
M.S.	Mechanical Engineering	University of Alabama, Tuscaloosa, AL	1999
M.S.	Mechanical Engineering	Zhejiang University, Hangzhou, China	1996
B.S.	Mechatronics Engineering	Xidian University, Xi'an, China	1993

RESEARCH SUMMARY: To understand material behavior and defect structure in advanced manufacturing & fabrication related to biological systems & energy conversion/storage applications

1. Advanced Tissue Fabrication
   - *1-1 Biofabrication using laser-induced forward transfer and nozzle jetting/extrusion*
   - *1-2 Biophysical modeling of fabrication-induced cell injury and engineered construct performance*
2. Material Development and Characterization using Advanced Manufacturing Technologies
   - *2-1 Modeling of process-induced variation of material microstructure and performance*
   - *2-2 Functional microsphere/microcapsule/nanoparticle fabrication*
3. Green Manufacturing
   - *3-1 Energy manufacturing using bioelectrochemical system*
   - *3-2 Process monitoring and environmentally conscious manufacturing*

For all the above topics, the research team seamlessly integrates the expertise in analytical, computational, and experimental trainings from various science and engineering fields.

FIVE RECENT REPRESENTATIVE PUBLICATIONS

Lin, Y., Huang, Y., and Chrisey, D., "Metallic Foil-Assisted Laser Cell Printing," *ASME J. of Biomechanical Eng*., Vol. 133(2), pp. 025001-1-5, 2011.

Yin, J., Coutris, N., and Huang, Y., "Role of Marangoni Instability in Fabrication of Axially and Internally Grooved Hollow Fiber Membranes," *Langmuir*, Vol. 26(22), pp. 16991–16999, 2010.

Schiele, N.R., Corr, D.T., Huang, Y., Raof, N.A., Xie Y., and Chrisey, D.B., "Laser-based Direct-Write Techniques for Cell Printing," *Biofabrication*, Vol. 2, 032001-1-14, 2010.

Wang, W., Li, G., and Huang, Y., "Modeling of Bubble Expansion-Induced Cell Mechanical Profile in Laser-Assisted Cell Direct Writing," *ASME J. of Manufacturing Sci. and Eng*., Vol. 131(5), pp. 051013-1-10, 2009.

Lin, Y., Huang, Y., Wang, G., Tzeng, T.J., and Chrisey, D.B., "Effect of Laser Fluence on Yeast Cell Viability in Laser-Assisted Cell Transfer," *J. of Applied Physics*, Vol. 106, pp. 043106-1-7, 2009. (Also in: *Virtual Journal of Biological Physics Research*, Vol. 18(5), September, 2009)

LEADERSHIP IN RESEARCH SOCIETIES

- Technical Program Chair of 2010 ASME Int. Manufacturing Science and Engineering Conference (MSEC) and 2012 Int. Symposium on Flexible Automation (ISFA)
- Associate Editor for ASME Journal of Manufacturing Science and Engineering (JMSE) and other two journals

MAIN HONORS AND AWARDS

- International Solid Freeform Fabrication (SFF) Symposium Outstanding Paper Award, 2009
- ASME International Symposium on Flexible Automation Outstanding Young Investigator Award, 2008
- NSF CAREER Award, 2008
- NAMRI/SME Outstanding Paper Award (on cell printing), 2007
- SME Branimir F. von Turkovich Outstanding Young Manufacturing Engineer Award, 2006
- ASME Blackall Machine Tool and Gage Award (for the best paper in manufacturing), 2005

Updated 01/2011