

Yen-Shan Lin

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Objective :

To obtain a position utilizing my strong experimental experience, analytical skills and research abilities.

Education:

Ph.D. Mechanical and Aerospace Engineering

UC San Diego (UCSD) and San Diego State University Joint Doctoral Program

GPA 3.62

M. S. Physics, National Tsing Hua University, 2006

B. A. Physics, National Tsing Hua University, 2003

Additional Language Skills:

Mandarin Chinese, Taiwanese

Professional History:

- Teaching assistant of Prof. Eugene. A. Olevsky's class in UCSD, 2008-2010
- Research assistant of Prof. Marc. A. Meyers's group in UCSD, 1/2007-1/2010
- Teaching assistant in San Diego Chinese Academy, 7/2008-7/2009
- Lab manager in Prof. Eugene. A. Olevsky's Powder Technology Laboratory, 9/2011-12/2011

Technical Skills:

- Five years experiences in powder consolidation: Spark Plasma Sintering machine, Theta and Anter dilatometer sintering device, Conventional tube furnace, Cold isostatic pressing, Freeze drying process
- Independently operated XRD(X-Ray Diffractometer), SEM(Scanning Electron Microscope), EDS, Micro-Hardness Testing, Nano-Indentation Testing, Quasi-Static Mechanical Testing Machine, Freeze Drying Device
- Proficient in Microsoft Office Word, Excel, Power Point, Matlab, Origin8, ImageJ

Research Projects:

- Structure characterization and mechanical testing of natural bio-materials.
- Fabrication of carbon-nanotube-reinforced hydroxyapatite composites by spark plasma sintering.
- Comparative study of conventional sintering and free pressureless spark plasma sintering on hydroxyapatite.

- Fabrication of porous hydroxyapatite materials with micro-channel structure by freeze drying process and free pressureless spark plasma sintering for biomedical applications.
- Assembling dye-sensitized solar cells and testing their efficiency by solar simulator device.
- Spark-plasma sintering of refractory high-strength composites.

Publications:

Y. S. Lin, E. A. Olevsky, and M. A. Meyers. “Mechanical properties and the laminate structure of Arapaima gigas scales” *J. Mech. Behav. Biomed. Mater.* 2011; 4: 1145-1156

Y. S. Lin, M. A. Meyers, and E. A. Olevsky. “Micro-channeled hydroxyapatite components by sequential freeze drying and free pressureless spark-plasma sintering”, *Advance in Applied Ceramics*. Accepted

M. A. Meyers, Y. S. Lin, E. A. Olevsky, and P. Y. Chen. “Battle in the Amazon: Arapaima vs. Piranha” *Adv. Biomaterials*. Accepted.

P. Y. Chen, A. Y. M. Lin, Y. S. Lin, Y. Seki, A.G. Stokes, J. Peyras, E. A. Olevsky, M. A. Meyers, J. McKittrick. “Structure and mechanical properties of selected biological materials” *Material Science Engineering C*. 2008; 208-226

E. Khaleghi, Y. S. Lin, M. A. Meyers and E. A. Olevsky. “Spark plasma sintering of tantalum carbide” *Scripta. Mater.* 2010; 63: 577-580

M. A. Meyers, A.Y. M. Lin, Y. S. Lin, E. A. Olevsky, and S. Georgalis. “The cutting edge: Sharp biological materials” *J.O.M.* 2008; 3: 19-24

P. Y. Chen, J. Schirer, A. Simpson, R. Nay, Y. S. Lin, W. Yang, Maria. I .Lopez, Jianan. Li, E. A. Olevsky, M. A. Meyers. “Predation vs. Protection: Fish Teeth and Scales Evaluated by Nanoindentation” *J. Mater. Res.* Accepted.

Presentations:

TMS 2009 Annual Meeting, San Francisco:
“Teeth: Structure and mechanical properties”

TMS 2011 Annual Meeting San Diego:
“Structure and mechanical properties of Arapaima scale”
“Spark plasma sintering of complex shape HAP-CNT composites”

List of referees:

Professor Eugene Olevsky, eolevsky@mail.sdsu.edu, San Diego State University, Mechanical Engineering

Professor Satchi Venkataraman, satchi@mail.sdsu.edu, San Diego State University, Aerospace Engineering & Engineering Mechanics