

CURRICULUM VITAE OF KHALID LAFDI

<p>Professor</p> <p>Mechanical Engineering & Materials Depts.</p> <p>Carbon Leader</p> <p>University of Dayton Research Institute</p> <ul style="list-style-type: none"> • 1991: D.Sc.; Physics (France) • 1989: Ph.D.; Phys. & Chemical Eng. (France) • 1987: Ms.; Chemical Engineering (France) <p>Experiences</p> <p>2001- present: Prof. at Univ. of Dayton 1994-2000: Research Prof at SIUC 1993: Ass. Prof at Univ. of Pau (France) 1992: Researcher at CNRS (France) 1991: Post Doc at Univ. of Toyohashi (Japan) 1990: Post Doc at Univ. of Leeds (UK)</p>	<p>Relevant Experience:</p> <ul style="list-style-type: none"> • Thermal and energy Managements. • Carbon foams: modeling, processing and properties. • Nanocomposites: processing and properties. • Carbon nanoconstituents: growth and functionalization. • Design fabrication of thermal property devices for micro- and nanometric measurements. • Surface and interfaces in composites. • Wear and friction of carbon materials. • Composite materials for implant application. . • Carbon Scaffold for Bone Plates and lenses. <p>Has published more than 140 articles in refereed journals in carbon science and technology.</p>
<p>2007- PLENARY AND THEMATIC CONFERENCES & SEMINARS:</p> <ul style="list-style-type: none"> • K. Lafdi (2007): Carbon Nanomaterials in Heat Transfer, April 4, 2007, University of Cincinnati. • K. Lafdi (2007): Carbon Science and technology, SAMPE Tutorial at Cincinnati, OH. • K. Lafdi (2007): Nanomaterials In Aeronautics, ACMA 2007, May 22-24, 2007, School of Technology (ESTA), Agadir, Morocco. • K. Lafdi (2007): Nanotechnology In the new era of aircraft Materials, Challons en Champagne- France nov 25-26,2007 . <p>2007-PUBLICATIONS IN REFERRED JOURNALS :</p> <ol style="list-style-type: none"> 1. Debelak B. and Lafdi K. "Use of Exfoliated Graphite Filler To Enhance Polymer Physical Properties". Carbon, carbon, Vol 45, 2007 pp.1727-1734 2. Lafdi K., Mesalhy O., Elgafy A., "Merits of employing foam encapsulated phase change materials for pulsed power electronics cooling applications," Journal of Electronic Packaging, February 2007, Assigned Control # EP-07-1023. (in press) 3. Czarnecki J., Lafdi K. and Tsonis P. "A Novel Approach to Control Growth, Orientation and Shape of Human Osteoblasts" Tissue Engineering, 2007. (in press) 4. Lafdi K., Mesalhy O., Elgafy A., (2007), "Graphite foams infiltrated with phase change materials as alternative materials for space and terrestrial thermal energy storage applications", CARBON, 2007, (in press). 5. Shaikh S., Lafdi K. And Silverman E. "The Effect of a CNT Interface on The Thermal Resistance of Contacting Surfaces". Carbon, Vol. 45, 2007. pp. 695-703. 6. Shaikh S., Lafdi K. and Ponnappan R. "Thermal Conductivity Improvement In Carbon Nanoparticle Doped PAO-Oil". Journal of Applied Physics, Vol. 5, 2007. 7. Lafdi K., Fox W., Matzek M. and Yildiz E. "Effect of Carbon Nanofibers-Matrix Adhesion on Polymeric Nanocomposite Properties". Journal of Nanomaterials, 2007 (available online). 8. Lafdi K., Fox W., Matzek M. and Yildiz E. "Effect of Carbon Nanofiber Heat Treatment on Physical Properties of Polymeric Nanocomposites". Journal of Nanomaterials, 2007 (available online) 9. M. Almajali, K. Lafdi, and S. Shaikh "Interfacial and capillary pressure effects on the thermal performance of wax/foam composites" Journal of Applied Physics Vol.102, No.3 , 2007. 10. Shaikh S., Lafdi K. and Huie J. "Thermal Conductivity of an Aligned Carbon Nanotube Array". Carbon, Vol. 45, 2007. pp. 2608-2613 	

11. **Lafdi K.**, Mesalhy O. and Shaikh S. "The Effect of Surface Energy on the Heat Transfer Enhancement of Paraffin Wax/Carbon Foam Composites". Carbon, Vol 45, 2007, pp. 2188-2194
12. **Lafdi K.**, Mesalhy O. and Shaikh S. "Experimental Study on Phase Change Process of Paraffin Wax/Aluminum Foam Composites". Journal of Applied Physics, 2007 (in press).
13. Grabinski C., Saber H. and **Lafdi K.** , "Effect of Dimension on Biocompatibility of Carbon-based Nanomaterials". Carbon, 2007 (in press).
14. Elgafy A. and **Lafdi K.** "Engineering Solution in Monitoring Nanoparticle-Fluid Flow During Nanocomposites Processing". Journal of Nanoparticle Research, Vol. 9, 3, 2007, pp. 441-454.
15. Shaikh S., **Lafdi K.** and Hallinan K. "Carbon Nano-additives to enhance latent energy storage of phase change materials". Journal of Applied Physics, 2007. (in review)

2007-CONFERENCES

16. Grabinski C., **Lafdi K.** and Hussain S. "Biocompatibility of Carbon Nanomaterials". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
17. Grabinski C., Shaikh S. and **Lafdi K.** "Effect of Carbon Nanomaterials on Respiratory Mucus". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
18. Almajali M., Shaikh S. and **Lafdi K.** "PCM Encapsulated Carbon Foam Behavior Under Transient Heat Flux". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
19. Debelak B. and **Lafdi K.** "Growth Mechanisms of Graphite Nanoflakes". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
20. Debelak B. and **Lafdi K.** "Use of Exfoliated Graphite Filler to Enhance Polymer Physical Properties". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
21. Shaikh S. and **Lafdi K.** "The Effect of a CNT Interface on the Thermal Resistance of Contacting Surfaces". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
22. Shaikh S. and **Lafdi K.** "Thermal Conductivity Improvement in Carbon Nanoparticle Doped PAO-oil". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
23. Shaikh S. and Lafdi K. "Effect of Carbon Materials on Thermal Wear of Sliding Surfaces". Intern. Carbon conference, Seattle. July 15 - 20, 2007.
24. Czarnecki J., **Lafdi K.** and Tsonis P. "Osteoblast Proliferation on Carbon-based Materials". Intern. Carbon conference, Seattle. July 15 - 20, 2007.

Patents:

- U.S. Patent No. [6,676,887](#), issued January 13, 2004 : Oxidation Resistant Carbon Materials Via Nanocrystalline Silicon Carbide Inclusions
- U. S. Provisional Application Serial No. 60/800,944 - "Method of Growing Carbon Nanotubes, Nanofibers and Whiskers on Carbon Substrates.
- U. S. Provisional Application Serial No. 60/800,945 - "Method Of Making Nano-Filament Based Carbon-Carbon Composites For Use As Brake Materials.
- Invention Disclosure, 2006: Design of Resistivity Scan
- Invention Disclosure, 2006: Functionalization of Nanoartifacts of Carbon FiberPreform

Book Chapters:

- Chapter 4: **Carbon Foam (Processing, Growth Mechanisms and Properties)** K. lafdi, T. beechem and G. Rosebrock, Physics and Chemistry of carbon Marcel Dekker Ed. 2008
 - Book 1 titled "**Carbon in Thermal Management**" (in progress). Editor: Khalid Lafdi , 2009 The book is going to be published by Springer
- Book 2 titled "**Emerging Technologies: Nano and Nano/Bio Composites**". Editors: Farzana Hussain, Alan K. T. Lau and Khalid Lafdi, 2008. The book is going to be published by "Taylor & Francis/CRC Press