

# **CURRICULUM VITAE OF BOR JANG**

## **DEAN, COLLEGE OF ENGINEERING AND COMPUTER SCIENCE**

Professor Materials Engineering  
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### **EDUCATION**

B.S. 1974, Physics, National Central University, Taiwan.

M.S. 1979 and PhD 1982, Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts.

### **EMPLOYMENT RECORD**

Walter Booth Distinguished Professor and Head, July 2002 – June 2005, Department of Mechanical Engineering & Applied Mechanics, North Dakota State Univ., Fargo, ND.  
Assistant Professor: Dec. 1, 1982-Sept. 15, 1987, Associate Professor (tenured): Sept. 15, 1987-September 15, 1992, Full Professor: September 15, 1992-July 2002, Department of Mechanical Eng. and Materials Eng. Program, Auburn University, Alabama, USA.  
Fulbright Scholar and Visiting Professor: 1991-1992, Department of Materials Science and Metallurgy, University of Cambridge, England, UK.

### **SELECTED HONORS AND AWARDS**

- \* **Recipient of the 1987 Ralph Teetor Award, Society of Automotive Engineers.**
- \* **Fulbright Scholarship (1991-92)**, the Fulbright Commissions (UK) and the Council for International Exchange of Scholars (USA) to work in the University of Cambridge.
- \* **Overseas Fellow Commonership (1991-92), Churchill College, U. of Cambridge.**
- \* **Alumni Professorship (1991-96), a five-year, non-renewable endowed chair professor position sponsored by the Alumni Association of Auburn University.**
- \* **EXXON Educational Awards, 1991 and 1992.**
- \* **Professor of The Year and Recipient of The Fred H. Pumphrey Teaching Award, Alumni Council, College of Engineering, Auburn University, 1988.**
- \* 1990 and 1992 NASA/ASEE Summer Faculty Fellowship Awards.
- \* **Recipient of the 2003 Space Technology Award, sponsored by NASA.**
- \* **Currently an Associate Editor for *the Journal of Manufacturing Systems* and *the J. of Manufacturing Processes*, both sponsored by the Society of Manufacturing Eng.**

### **BOOKS EDITED OR WRITTEN**

1. B. Z. Jang (editor), "Advanced Materials and Processing for Future Transportation Design", SAE SPE. Tech. Pub. #754, Warrendale, PA, 8/88.
2. B. Z. Jang, "Advanced Polymer Composites: Principles and Applications," 387 pages, ASM International, Dec. 1994 (being revised for a 2<sup>nd</sup> edition).

### **SCIENTIFIC PUBLICATIONS (200 +)**

#### **SELECTED PATENTS (totally 100+ issued or pending)**

1. J. H. Liu and B. Z. Jang, "Process and Apparatus for the Production of Nano-Scaled

- Powders,” U.S. Patent No. 6,398,125 (June 4, 2002).
2. J. H. Liu and B. Z. Jang, “Method for Producing Environmentally Stable Reactive Alloy Nano-Powders,” U.S. Patent No. 6,444,009, 09/03/2002.
  3. B. Z. Jang, J. Liu, S. Chen, H. Mahfuz, and A. Adnan. “Nanotube Fiber Reinforced Composite Materials and Method of Producing Fiber Reinforced Composites,” U.S. Patent No. 6,934,600 (Aug. 23, 2005).
  4. B. Z. Jang and W. C. Huang, “Nano-scaled Graphene Plates,” U.S. Pat. No. 7,071,258 (07/04/2006); application submitted on Oct. 5, 2002.
  5. B. Z. Jang, L. Yang, S. C. Wong, and Y. J. Bai, “Process for Producing Nano-scaled Graphene Plates,” U.S. patent pending, 10/858,814 (06/03/2004).
  6. Bor Z. Jang, Aruna Zhamu, Jinjun Shi, and Jiusheng Guo, “Carbon Anode Compositions for Lithium Ion Batteries,” US Pat. Pending, 11/893,398 (08/17/2007).
  7. Bor Z. Jang and Aruna Zhamu, “Process for Producing Carbon Anode Compositions for Lithium Ion Batteries,” US Pat. Pending, 11/906,984 (10/05/2007).
  8. Aruna Zhamu and Bor Z. Jang, “Graphite-Carbon Composite Electrodes for Supercapacitors” US Pat. Pending 11/895,657 (08/27/2007).
  9. Aruna Zhamu and Bor Z. Jang, “Method of Producing Graphite-Carbon Composite Electrodes for Supercapacitors” US Pat. Pending 11/895,588 (08/27/2007).
  10. Aruna Zhamu and Bor Z. Jang, “Process for Producing Nano-scaled Graphene Platelet Nanocomposite Electrodes for Supercapacitors,” U.S. Patent Pending, 11/906,786 (10/04/2007).
  11. Aruna Zhamu and Bor Z. Jang, “Hybrid Anode Compositions for Lithium Ion Batteries,” U.S. Patent App. No. 11/982,662 (11/05/2007).
  12. Aruna Zhamu and Bor Z. Jang, “Nano Graphene Platelet-Based Composite Anode Compositions for Lithium Ion Batteries,” U.S. Pat. App. No. 11/982,672 (11/05/2007).
  13. Aruna Zhamu and Bor Z. Jang, “Anode Protective Layer Compositions for Lithium Metal Batteries,” U.S. Patent App. No. 12/001,981 (12/14/2007).

**REFEREED REVIEW ARTICLES (8); REFEREED JOURNAL PUBLICATIONS (83); REFEREED CONFERENCE PROCEEDING PAPERS (77); INVITED SEMINARS (74); SHORT COURSES AND WORKSHOP TAUGHT (14); GRADUATE STUDENTS SUPERVISED (Served as the major professor/thesis advisor for 35 MS and 23 PhD students, plus as a member of more than 100 MS/PhD committees); POST-DOCTORAL RESEARCH ASSOC./VISITING SCHOLARS SUPERVISED (13); RESEARCH GRANT HISTORY (PI or Co-PI for 48 grants with a total amount in excess of \$10M).**

### **Synergistic Activities**

(1) Dr. Jang is one of the pioneers in discovering nano graphene platelets (NGPs), a much lower cost alternative to carbon nanotubes (CNTs). Dr. Jang’s research team has developed several processes for mass-producing NGPs and several NGP-based materials compositions for a range of functional and structural applications.

(2) Currently serving as a research team leader of a DOE SBIR project on “NGP nanocomposites” (Phase-II, August 2006-August 2008) and a Phase-II grant on NGP applications to fuel cell bipolar plates.

(3) As an entrepreneur, Dr. Jang has founded three start-ups, including Angstrom Materials, LLC., which is a global leader in research, development, and production of NGPs.