

## **Antoine Berret**

4586M Valley Parkway SE, Smyrna, GA 30082, (678) 789-2303  
raoulberretjr@gmail.com

### **CAREER OBJECTIVE**

An Engineer position with an organization that will allow me to utilize my research skills, experience with nanotechnology and Engineering Design.

### **EDUCATION**

#### **Master of Science, Mechanical Engineering, 12/2005**

Thesis title: "Morphologic Influence of High Magnetic Fields on the in-situ MOCVD (Metal Organic Chemical Vapor Deposition) of Xylene-Ferrocene Nanotubes and Structures"

The Florida State University, Tallahassee, FL

#### **Bachelor of Science, Mechanical Engineering, 08/2003**

The Florida State University, Tallahassee, FL

### **RELATED EXPERIENCE**

#### **Research Affiliate, 01/2005 – Present**

School of Material Science & Engineering, Georgia Institute of Technology, Atlanta, GA

- Assist in the design and development of a spray pyrolysis apparatus for the fabrication of fuel cell electrodes
- Design and optimization of MOCVD apparatus for the thermal-magneto synthesis of carbon nanotubes (CNTs) and structures
- Characterize CNTs and other related structures via regular operation of SEM (Hitachi S-800) and FESEM (Leo 1530) scanning electron microscopes
- Prepare for routine operations of a 14T superconducting magnet system

#### **Undergraduate & Graduate Research Assistant, 09/2000 – 12/2004**

National High Magnetic Field Laboratory, Tallahassee, FL

- Designed reaction chambers and systems for the successful synthesis of novel CNTs and related structures in high magnetic fields (20 Tesla)
- Coordinated and managed the purchase and utilization of project related equipment by corresponding with national and local vendors - distributors on a regular basis
- Interacted, consulted and coordinated with machinists and professors with regard to design evaluation and optimization
- Assisted in the characterization of various films via ESEM, TEM, and X-Ray diffraction pole figures
- Drafted and submitted research proposals for thermal-magneto synthesis of CNTs experiments, and conducted follow-up with regard to implementation and facilitation
- Designed multi-part components as needed for project development

**Research Intern, 06/2002 – 08/2002**

Materials Science & Engineering Dept., Carnegie Mellon University, Pittsburgh, PA

- Processed ceramic substrates for the stabilization of the metastable hexagonal phase in rare-earth  $RE\text{MnO}_3$  thin films via Pulsed Laser Deposition
- Participated in and contributed to discussions, and developed presentations for classmates and faculty members on the significance of ceramic substrates processing

**Teaching Assistant, 08/2001 – 12/2001**

Mechanical Engineering Dept., FAMU-FSU College of Engineering, Tallahassee, FL

- Tutored about 40 undergraduate students in Mechanics & Materials II
- Reviewed and graded assignments

**Research Intern, 06/2000 – 08/2000**

Materials Science & Engineering Dept., Carnegie Mellon University, Pittsburgh, PA

- Assisted in the manufacture and texture analysis of aluminum thin films grown via Plasma Sputtering
- Developed ancillary documents and essential reports related to project assignments

**Summer Intern, Work Instruction Editor, 05/1998 – 08/1998**

John Deere Waterloo Works, Waterloo, IA

- Designed and edited Operation Manual Sheets (OMS) for assembly line personnel
- Assisted in planning, and offered strategic insights into cost and effectiveness of production line relocation
- Collaborated with management to implement line production activities

**RELEVANT COURSEWORK**

SEM	Texture and Anisotropy	Intro. to Heat Transfer
Intro. to Comp. Materials	Continuum Mechanics	FEM

**COMPUTER & TECHNOLOGY ABILITIES**

MS Word, Excel, PowerPoint, Project, Image Pro, Adobe Photoshop  
Some familiarity with Pro/Engineer, ALGOR, MathCAD, MATLAB, FORTRAN and C

**PUBLICATION**

Berret, A., Dahmen, KH., Kalu, P.N., and Garmestani, H., (2003, Fall). In-situ synthesis of carbon nanotubes in high magnetic fields. *Engineering Materials, Annual Research Review 2003, National High Magnetic Field Laboratory.*

**LANGUAGES**

Fluent in English and French

REFERENCES AVAILABLE UPON REQUEST