

# Abhijeet Dhamne

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**Objective:** To obtain a challenging position in field of materials science focusing on synthesis, characterization and applications of polymer and ceramic materials

## Education:

July 2003, University of Central Florida, Orlando, FL  
**Master of science, Major: Materials Science and Engineering**

Aug 2001, Pune University, Pune, India  
**Bachelor of Engineering, Major: Petrochemical Engineering**

## Experience:

### July 03- Present, Research Assistant, Department of Mechanical Engineering, UCF

- Developing a proposal for biosensor to detect the extent of Ox-LDL in the blood
- Synthesis of ZnO/PVP nanocomposite material that can be applied as biosensor

### Jan 02- July 03, Graduate Research Assistant, Advanced Materials Processing and Analysis Center, UCF

- Polymer-derived ceramics. Synthesis of polymer-derived SiCN and SiAlCN ceramics by polymer pyrolysis route for high temperature applications. SiAlCN is found to have better oxidation resistance than SiCN that can be applied in aerospace, automobile industries
- Structural and thermal analysis of polymer and ceramic materials using FTIR, TGA/DSC and GC/MS to understand the chemistry behind the process at various stages

### Aug 01- Aug 02, Graduate Teaching Assistant, UCF.

- Conducting labs in the department of Chemistry and grading homework for the course "Structure and properties of Materials" at the undergraduate level

### July 99, Summer trainee engineer, Supreme Petrochem Ltd., India

- Rotational training in all the departments to learn all the manufacturing process of polystyrene

## Publications:

- Dhamne A., Fookes B., Zhang L. and An L., "Synthesis and thermal analysis oaf polyalumasilazanes for Si-Al-C-N ceramics", Applied Organometallic Chemistry (in communication)
- Bharadwaj L., Dhamne A., An L., Fookes B., and Kapat J., "Polymer derived Si-Al-C-N ceramics for high temperature applications", accepted by Proc. of IGTI, ASME Turbo 2003
- Bharadwaj L., Wang Y., Xu W., Dhamne A. and An L., "Synthesis and comparison of oxidation behavior of polymer derived SiAlCNO and SiAlCN ceramics", Ceramic Engg. Sci. Proc. 24, 2003

## Related Courses:

Physical Metallurgy, Mechanical Metallurgy, Polymer Science, Introduction to Ceramics, Metallurgy Thermodynamics, Strength of Materials, Study of composites

## Skills:

- Analytical Techniques: FTIR, SEM, DSC, TGA, XRD, GC/MS, UV-VIS
- Computer Skills: Win 98/00/NT, MS office, AutoCAD

## Awards and honors:

- Listed in 25<sup>th</sup> National Dean's List

## Activities:

- Member of American Ceramic Society, American Society of Mechanical Engineer
- General Secretary of the college during senior year to execute various student activities