



Maryam GOLABCHI

Home Country

Iran

Degree

**PhD in Materials
Science**

Expertise

Chemical Engineering

Research Focus

**Carbon Nanotubes
and
Aluminum-Carbon
Composites**

Host University

**Colorado School of
Mines,
United States**

**Fellowship Awarded
2005**

Maryam Golabchi was born and educated in Iran. Her five brothers are engineers and her sister is a teacher.

After graduating from high school, Maryam found herself interested in chemical engineering and enrolled at Tehran Polytechnics University.

While pursuing her master's degree, Maryam also began working as a process engineer at Namvaran, one of the best consulting engineering companies in Iran.

Three years later she decided to return to research and enrolled at Colorado School of Mines in the United States, where she began pursuing a doctorate in nanotechnology specializing in computational modeling. In Colorado her thesis is titled "Thermodynamics and Kinetics of Stressed Graphene, Carbon Nanotubes and Aluminum-Carbon Nano-Composites."

Maryam is investigating the feasibility of forming composites using both experimental simulations and computational techniques. Carbon nanotubes are often touted as the building blocks of nanotechnology due to their special mechanical and electrical properties. Graphene and carbon nanotubes can increase the toughness and hardness of aluminum, the most plentiful metal on Earth, which is remarkable for its low density and its ability to resist corrosion and erosion.

Maryam's work on aluminum reinforced with carbon nanocomposites may lead to numerous industrial applications including new high-performance alloys and composites for a variety of structural applications in the construction, fabrication, automotive and aerospace industries.

When she completes her doctorate, Maryam plans to return to Iran to teach at the university level.