



Marcia BRAGATO

Home Country
Brazil

Degree
Post-Doctorate in
Metallurgical
and Materials
Engineering

Expertise
Materials Engineering

Research Focus
Hazardous Waste
Treatment and
Management

Host University
Northeastern
University,
United States

Fellowship Awarded
2006

Marcia Bragato was born in a small Brazilian city, Arco-Iris, which means “rainbow.” An only child, she and her cousin were the first in her family to attend university. After moving to Sao Paulo in Brazil she became environmentally aware after witnessing first-hand the pollution in nearby Cubatao, which at that time was considered to be one of the most polluted cities in the world.

Marcia graduated from the University of Sao Paulo with her master’s degree in organic chemistry in 2000 and her PhD in materials engineering in 2006, then entered a post-doctoral program in metallurgical and materials engineering at Northeastern University in the United States.

She began her research career in a multidisciplinary group looking at hazardous waste treatment and management. She developed methods to remediate soil contaminated by hydrocarbons and metals using the conceptual limitation that these methods could not leave harmful residues or use harmful chemicals in the process. Her post-doctoral research focus was also on hazardous waste management. She looked at ways of developing low-cost techniques to transform waste in products into energy and other useful products. She also studied the use of green chemistry principles to develop less-harmful processes for producing materials (everything from chemicals to new industrial or consumer products). In addition, because gaseous emissions are a difficult to-control byproduct of almost every waste treatment, she investigated ways to better control biomass combustion emissions.

Marcia is investigating ways to reduce or reuse residues at a government technological center known as CEFETES in the small Brazilian city of Vitoria. Vitoria has a strong mining and metallurgical industry and is suffering environmental impacts. CEFETES is now offering graduate courses in the area of metallurgical waste reduction, and as a visiting professor Marcia is teaching and helping make the new program viable. Eventually she plans to teach at a Brazilian government-sponsored university.