

A Closer Look at Research Clusters

SUSTAINABILITY and SOCIAL VENTURING

Overview	<p>Sustainable technologies are technologies that use less energy and fewer natural resources, and do not directly or indirectly harm the environment. Examples of sustainable technologies include green chemistry, alternative energy technologies, novel use of renewable materials, design of “green” buildings and infrastructure, and many others. The adoption of sustainable technologies by organizations goes well beyond the technology and requires a systematic approach to thinking about how sustainability can become an organizational mindset and viable business model with an integration of for-profit and non-profit sectors. This is at the heart of organizational change and social venturing.</p>
Focus of Research at UMass Boston	<ul style="list-style-type: none">• Dynamics of collaborations for sustainability, focusing on governance and multi-party negotiations in climate change, regional climate change policies, and the regional renewable energy industry• Organizational change and innovation management of sustainability and social venturing• Gas-phase kinetics and photochemistry• Use of carbon for catalysts and hydrogen storage• Electrochemical research for renewable energy, sensors and water treatments• Algae-derived biofuels, solar cells, novel charge storage techniques• Design of synthetic methods for energy efficiency• Preserving tropical rain forests
UMass Boston Departments Involved	<p>Chemistry; Biology; EEOS; College of Management; Economics Department; Ethnic studies institutes and centers</p>
Collaborations Established and Potential	<p>Active work overseas, including India and Columbia. Linkage with Rocky Mountain Institute. Strong potential to assist major corporations and community groups seeking to embrace sustainability.</p>
Distinctive UMass Boston Approach	<ul style="list-style-type: none">• Integration of sustainable technology development and management of organizations seeking to advance sustainability• Become the leading center for collaborations with regional industries on sustainability models and organizational approaches — leverage to define requirements for advancing technology solutions