

Moving forward together toward a cleaner, safer future

SUSTAINABILITY

The renewable energy industry has the potential to significantly improve human health, safety, and the environment around the globe. Unfortunately, the industry's products rely on toxic chemicals used in manufacturing processes, which in turn pose challenges to the decommissioning and recycling of the products.

The Collaboratory for a Regenerative Environment (CoRE) brings together academic experts in materials science with entrepreneurial nonprofit organizations to accelerate clean production and sustainable materials in the renewable energy economy. Our innovative collaborations and data-driven tools enable business, government, and nonprofit leaders to identify and select inherently safer chemicals and sustainable materials for a healthier renewable energy economy.

CoRE integrates three key platforms



Science Platform: shows what is possible



Tools Platform: enables what is possible



Stakeholder Platform: advocates for what is possible

CoRE has achieved good results since its inception just a few short years ago. Today, we are poised to continue our groundbreaking work, and keep serving our stakeholders as we add to our impressive list of accomplishments. We take a holistic view of materials development, including determining the ability to synthesize a new material, as well as studying how it will perform, and its impact on the manufacturing process and sustainability.

When we identify potential chemistries that meet all four of these criteria, we use an artificial intelligence framework to discover the most promising new chemistries, as well as new tools for analyzing them.

SYNTHESIS

NEW MATERIALS FEEDBACK LOOP MANUFACTURING

PERFORMANCE

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MACHINE LEARNING



View the full Elements of Change report and learn more at CoreBuffalo.org