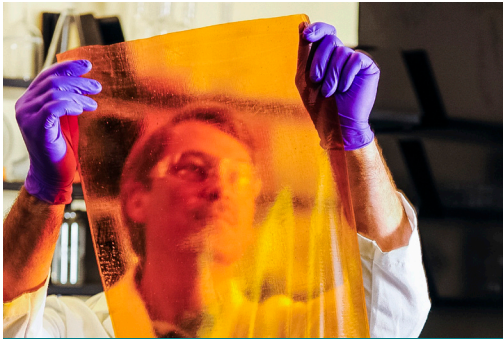


**Office of Research**

University of South Carolina

# Advanced Materials

Innovative substances and components build a stronger, safer tomorrow.



## USC Research Focus Area: Advanced Materials

Materials are the physical components and substances used to make end products like cars, televisions and solar cells. These products have become lighter, faster and more modern over the decades thanks in no small part to new, better materials. USC's advanced materials researchers engineer new materials to create innovative products and improve the things we use every day, enhancing lives in the process.

## Strategic Approaches to the Generation of Electricity (SAGE) Center

[cec.sc.edu/sage](http://cec.sc.edu/sage)

Researchers Jochen Lauterbach and Jason Hattrick-Simpers in the SAGE Center excel in the high-throughput experimentation methods that make the process of developing new materials faster and more efficient by allowing researchers to conduct and gather data from many experimental tests at the same time. Thanks to their specialized expertise and experience, in 2014, the Whitehouse Office of Science and Technology Policy asked them to conduct a high-throughput experimentation workshop for the nation's leading materials scientists and prepare a white paper to guide the next steps in the Materials Genome Initiative, a Whitehouse effort to coordinate engineering of advanced materials.

## McNAIR Center for Aerospace Innovation and Research

[sc.edu/mcnair](http://sc.edu/mcnair)

The McNAIR Center for Aerospace Innovation focuses their research efforts on specific industry needs, including analysis, design, optimization, and manufacturing of engineered materials and structures. In 2014 McNAIR Center researchers acquired an industrial-scale Ingersoll carbon fiber placement machine, making them the first university lab in the world to have one. This device is a smaller version of the one used to create composite fuselages for the Boeing 787 Dreamliner. It will enable them to build concept prototypes of new aerospace components for industry partners, pushing manufacturing of new materials forward.



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For more: [sc.edu/research/research\\_focus\\_areas/advanced\\_materials](http://sc.edu/research/research_focus_areas/advanced_materials)