

UW-Madison: Announces two teams chosen as 2021 WARF Innovation Award winners

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MADISON — A team that created a device for detecting explosives and a cross-disciplinary team working at the frontiers of medicine and nanotechnology have taken top honors from the Wisconsin Alumni Research Foundation.

The 2021 WARF Innovation Award has been given to the University of Wisconsin-Madison's Jiamian Hu, professor of materials science and engineering, and graduate student Shihao Zhuang for their work, Terahertz Imaging System for Global Security.

The second winning team includes Shaoqin "Sarah" Gong, professor of biomedical engineering; Zachary Morris, professor of human oncology; biomedical engineering postdoctoral researcher Ying Zhang; and human oncology researcher Raghava Sriramaneni for their work, Nanoparticle to Render Tumors More Susceptible to Treatment.

The materials science and engineering team's improved, narrowband terahertz emitter has the potential to safely and non-intrusively detect explosives and other dangerous materials in public places like subway stations and stadiums.

The cross-disciplinary team combined its novel nanoparticle, radiation therapy and a cellular division checkpoint inhibitor in an approach that could expand the number of tumors responsive to immunotherapy.

An independent panel of judges selected the winners from a field of six finalists drawn from several hundred invention disclosures submitted to WARF over the prior

12 months. The winning teams each receive an award of \$10,000, with the funds going to the named UW-Madison inventors.

WARF helps steward the cycle of research, discovery, commercialization and investment for UW-Madison. As an independent nonprofit, the foundation manages more than 2,000 patents and an investment portfolio as it funds university research. It also obtains patents for campus discoveries and licenses inventions to industry.

“Each year, our Innovation Awards recognize some of the most exciting early-stage solutions to real-world problems,” says Erik Iverson, CEO of WARF. “We’re pleased to celebrate the nominees and all UW-Madison innovators working to discover and translate research with the power to touch lives. From human health and a greener future to cutting-edge engineering, the passion to make a difference remains strong across campus.”

The other 2021 WARF Innovation Award finalists include teams advancing the following technologies:

- Making Spectroscopy Accessible to All
- Green Synthesis of Bio-Based Polyurethanes and Polyesters
- Enhanced Probiotic Delivery to Treat Intestinal Disorder
- Indoor Sound Shaping Based on Broadband Metamaterial

Learn more about each team and the 2021 WARF innovation awards: <https://www.warf.org/news/two-uw-madison-teams-chosen-2021--warf-innovation-award-winners>