

USU Patents in 2024

Contact USU Technology Transfer Services if you think your research might have commercial potential, or if it could impact society in other ways.

02/06/2025

USU Patents in 2024

Continuing its tradition of innovative translational research, USU was awarded 16 patents in the 2024 calendar year for technologies originating in a variety of departments, including:

Electrical and Computer Engineering

- Magnetic field containment for use in electric vehicle roadway power transfer (Regan Zane et al.)
- Constant-current-to-constant-voltage DC-DC power electronics converter (Hongjie Wang et al.)

Biological Engineering

- Glucuronide production for eliminating drugs and chemicals from the body (Jixun Zhan)
- Red mud compositions for biomass pyrolysis (Foster Agblevor et al.)

Chemistry & Biochemistry

- Nanostructures for electrochemical carbon dioxide reduction (Yi Rao et al.)
- Stable, non-corrosive electrolytes for high-performance rechargeable ion batteries (Tianbiao Liu et al.)

Biology

- Antifungal amphiphilic kanamycin compounds (Jon Takemoto, Tom Chang)
- Transgenic silkworms expressing hagfish proteins (Justin Jones et al.)

Mechanical and Aerospace Engineering

- Cavity deflation for objects (e.g., torpedoes) entering water, reducing impact splash (Areti Kiara et al.)

Applied Sciences, Technology & Education

- Hands-free crutch for leg injuries (Scott Greenhalgh)
- "Crescent" cam tool for use in rock climbing (Baylee Vogler)