

FLYING DRILLER

Tech ID: 34262 / UC Case 2026-023-0

PATENT STATUS

Patent Pending

BRIEF DESCRIPTION

UC Berkeley researchers have developed a novel dispersion system for agricultural and environmental payloads, including seeds, soil amendments, miniature soil sensors, and so forth. Dispersive packages are biodegradable and biomimetically designed with similarities to natural seeds. Aerodynamic properties control large-area dispersions, while importantly, tunable gyroscopic properties are programmed for penetration parameters, such as depth, upon impact. Payload distribution can be fine-tuned accounting for local soil moisture and grain-size.

SUGGESTED USES

- » Seed and seedling deployment for ecological restoration
- » Soil preparation via deep penetration of physical and chemical conditioning
- » Sensing and monitoring

ADVANTAGES

- » Programmable ground interactions leveraging both gravitational inertia and gyroscopic drilling
- » Biodegradable distribution packages do not require retrieval
- » Tunable for local environments

RELATED MATERIALS

CONTACT

Sabrina N. David
sabrina.david@berkeley.edu
tel: .



INVENTORS

» Yao, Lining

OTHER INFORMATION

CATEGORIZED AS

- » **Environment**
 - » Other
 - » Remediation
 - » Sensing
- » **Agriculture & Animal Science**
 - » Other
 - » Plant Varieties
- » **Biotechnology**
 - » Other
- » **Engineering**
 - » Engineering
 - » Robotics and Automation
- » **Materials & Chemicals**
 - » Agricultural
 - » Pesticides and Insecticides
- » **Sensors & Instrumentation**
 - » Biosensors
 - » Environmental Sensors
 - » Other

RELATED CASES



University of California, Berkeley Office of Technology Licensing

2150 Shattuck Avenue, Suite 510, Berkeley, CA 94704

Tel: 510.643.7201 | Fax: 510.642.4566

<https://ipira.berkeley.edu/> | otl-feedback@lists.berkeley.edu

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