FLASH, a Light Device for Species-Specific Behavioral Control of Insects

Tech ID: 34569 / UC Case 2026-538-0

BRIEF DESCRIPTION

FLASH (Fluctuating Lights of Actuatable Spectral Heft) is a novel multi-LED light device designed for species-specific behavioral control of insects as an eco-friendly alternative to chemical pesticides.

FULL DESCRIPTION

FLASH utilizes tailored light patterns to manipulate insect behavior by targeting their unique visual systems, effectively repelling harmful insects and attracting beneficial pollinators. This sustainable technology offers a cost-effective, environmentally safe solution for insect control, currently demonstrated in prototype form with successful laboratory validation.

SUGGESTED USES

- Crop protection and pest management in agriculture
- Horticulture and greenhouse insect control
- Enhancement of pollination in commercial farming
- Environmentally conscious pest control in residential and public spaces

ADVANTAGES

- Environmentally safe, species-specific alternative to chemical pesticides that minimizes ecological disruption while supporting beneficial pollinators.
- Cost-effective and sustainable pest control solution enabled by programmable, light-based targeting.
- Validated through successful laboratory prototype testing, demonstrating reliable, targeted insect behavioral control

PATENT STATUS

Patent Pending

CONTACT

Richard Y. Tun
tunr@uci.edu
tel: 949-824-3586.

OTHER INFORMATION

CATEGORIZED AS

- **Optics and Photonics**
  - All Optics and Photonics
- **Agriculture & Animal Science**
  - Plant Traits
- **Materials & Chemicals**
  - Pesticides and Insecticides

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