Why Enter?

DISSECT today's most complex lighting challenges alongside industry experts and thought leaders

EXPOSE your research and prototypes to a wide variety of companies

NETWORK, NETWORK, NETWORK for possible employment opportunities

PRIZES

Two Grand Prize Winners are selected to present during the workshop and participate in the virtual poster session

Honorable Mentions are selected to participate in the virtual poster session

Student Poster Competition

**U.S. Department of Energy Lighting R&D Workshop
Co-sponsored by the Illuminating Engineering Society**

January 31–February 3, 2022

Submit a **poster abstract** highlighting your work to shape the future of lighting

Since 2003, the DOE Lighting R&D Workshop has drawn the **best and brightest** in the industry to share the latest on lighting technology advances. **Connect** with these top experts and thought leaders at the 19th annual Lighting R&D Workshop and poster session!

The 2022 Workshop will be a virtual event; registration is free.

SUBMISSION DEADLINE: **Monday, November 8, 2021**

SELECTIONS ANNOUNCED: **Tuesday, November 30, 2021**

FULL COMPETITION DETAILS: **https://www.energy.gov/eere/ssl/2022-lighting-rd-workshop-student-poster-competition**
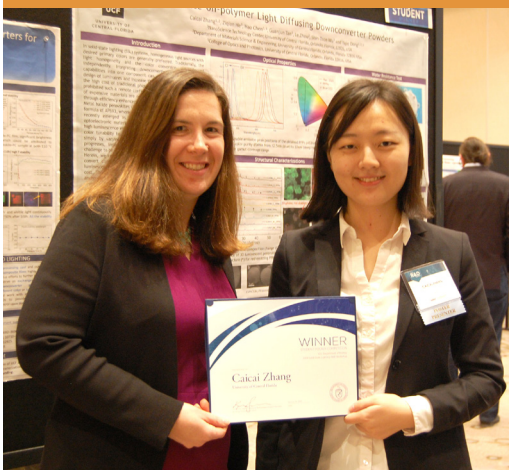
U.S. DEPARTMENT OF ENERGY | Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

IES Illuminating ENGINEERING SOCIETY

PARTICIPATION CRITERIA

- Two submissions maximum per lead researcher.
- Previous winners may apply again, but the content must show significant progress if it is the same research topic.
- University must be in the United States.
- Post-docs are not eligible.
- Currently funded DOE Lighting R&D projects are not eligible.

SUBMISSION INSTRUCTIONS

- Submit a one-page abstract outlining the background and relevance of your work, key achievements, and future work, plus one additional page with two or three sample figures.
  - PDF files only
  - File name format: Lastname_Firstname_University.pdf
- Send abstracts to sslworkshop@akoyaonline.com by 11:59 p.m. Pacific **Monday, November 8, 2021**.
  - Submitting party must be the lead author.

JUDGING

- Submissions will be judged based on:
  - Quality of research, novelty, and innovation (50%)
  - Impact toward advancing the field of solid-state lighting (30%)
  - Presentation quality and clarity (20%)
- Selections will be notified by **Tuesday, November 30, 2021**.

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QUESTIONS?
EMAIL: sslworkshop@akoyaonline.com

ENTRIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING TOPICS:

Materials & Devices

- Increased efficiency of amber and red LED emitter materials (conventional semiconductors or novel material systems)
- Novel OLED materials and structures for high efficiency and stability
- Improved emitter materials for UV-C LEDs
- Cd-free quantum dot or perovskite down-converters
- Phosphors for high-luminance applications
- Novel light extraction for OLED or LED devices
- Advanced LED devices: micro-LEDs, tunnel junctions, UV-C, metasurfaces
- LED/laser device innovations for visual light communication
- Advanced simulations for new materials discovery — LED emitters, phosphors, quantum dots

Lighting Product/System Concepts

- Dynamic optical control—beam steering, advanced color mixing, novel color sensors
- Advanced lighting concepts that demonstrate improvements to lighting application efficiency
- Additive manufacturing for luminaires
- Use of sustainable materials in luminaires (lower environmental impact: reduced embedded energy, recyclability, lower weight)
- SSL drivers with wide-bandgap power electronics — integration
- VR/AR approaches for lighting design and assessment
- New functionality integration into SSL luminaires
- Novel gesture controls for lighting
- Battery-integrated lighting or in-home off-grid lighting (renewable energy connection ready)
- Integration of lighting with other building systems

Lighting Science

- Human physiological responses to light (visual or non-visual)
- Horticultural physiological responses to light
- Animal responses to light
- Color science
- New lighting metrics