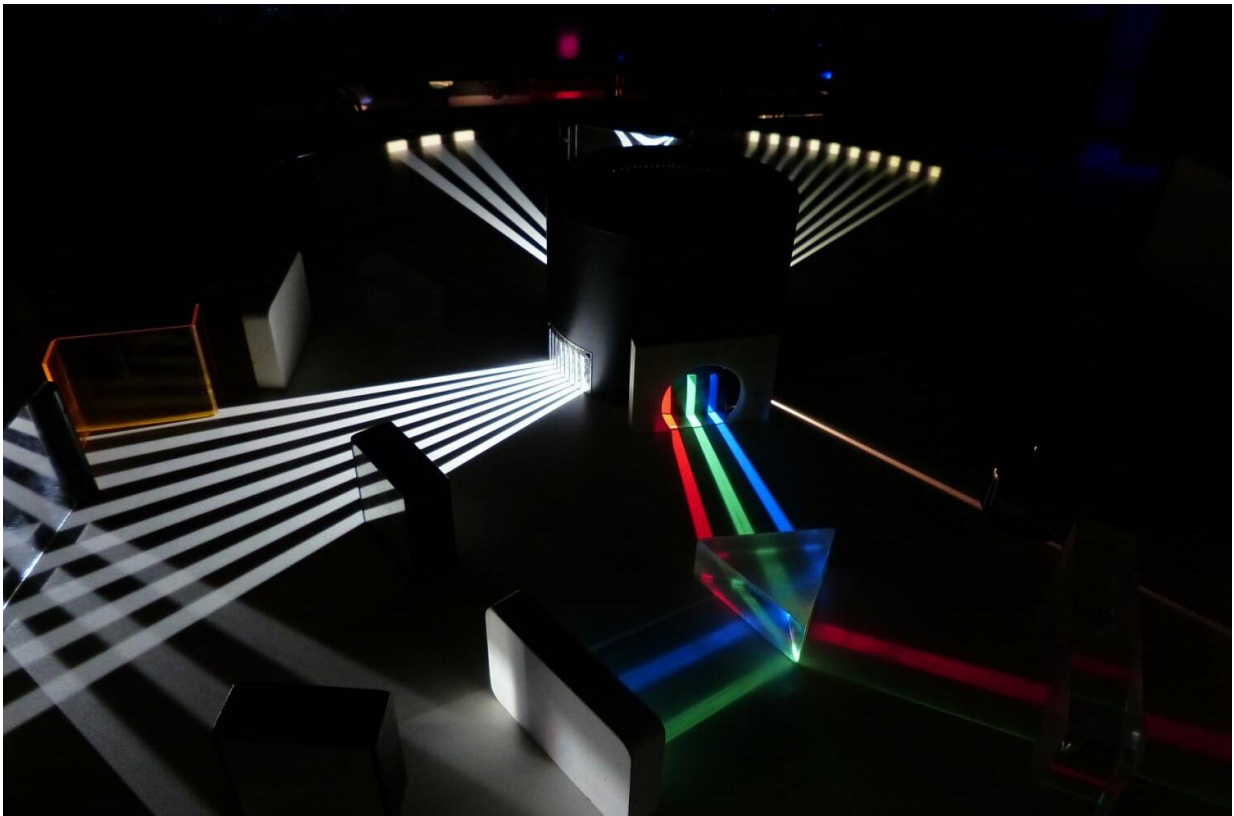


# Video: Using light to move wireless data faster

March 15 2019, by Joseph Blumberg

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Credit: CC0 Public Domain

"We explore a range of projects that turn light into a powerful medium for data communication and object or behavioral sensing," says Xia Zhou, an associate professor of computer science. "Our recent projects

include visible light communication systems and applications, smartphone sensing, and efficient spectrum monitoring to enforce the usage of radio spectrum."

While her research interests include [mobile systems](#) and wireless networking, most of her current projects center on light, to which she refers as a ubiquitous medium around us.

Her co-authored paper on a new wireless communication technology won the best video award at "MobiCom 2016: The 22nd Annual International Conference on Mobile Computing and Networking." Known as "DarkLight," this technology employs short, almost imperceptible light pulses to transmit information. The research demonstrated for the first time how [visible light](#) could be used to transmit data even when the light appears to be extremely dim or nonexistent.

"Our efforts so far have established key system pieces to turn ubiquitous light into a powerful sensing medium. Moving forward, I'm fascinated by the aspect of applying our light sensing system to monitor, analyze, and better understand human behaviors," she says.

Provided by Dartmouth College

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