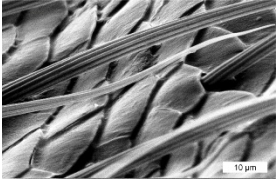


CREATION MOMENTS

Proclaiming Evidence for Truth

THIS WEEK'S CREATION MOMENT

Fireflies Light Path to Brighter Bulbs



For God, who commanded the light to shine out of darkness, hath shined in our hearts, to give the light of the knowledge of the glory of God in the face of Jesus Christ. – 2 Corinthians 4:6

If you think that light-emitting diode bulbs are bright, wait until you see what scientists are developing – an LED that's much brighter than the bulbs we're already using. And we can thank one of God's most delightful creatures – the firefly – for lighting the path to these brighter bulbs!

Researchers in Belgium examined *Photuris* fireflies under a scanning electron microscope to see if they could identify the structures that produce the light. After identifying seven structures as candidates for increasing the brightness, computer simulations helped them determine it was the "misfit scales on the light-emitting organ's surface that boosted its brightness."

The multiple abrupt edges – much like the shingles on a roof – were seen to scatter light rays to increase the amount of light that escapes the firefly's glowing lantern. When a second team of scientists put this to the test by etching a similar shingle-like pattern on existing LED bulbs, they found it boosted the bulb's light output by 55 percent.

We don't know when these bulbs will be available to consumers. But we do know that these brighter LEDs didn't come about by accident. They were designed by scientists and engineers who knew where to look for answers. After all, engineers know a good design when they see it!

Ref: <http://discovermagazine.com/2014/julyaug/7-brighter-idea>. "Fireflies Inspire Brighter Lights," M. Hoff, *Discover*, 6/2/14. Photo: The jagged scales on a firefly's lantern help the bug shine brighter. Courtesy of Optics Express. Used for educational purposes under the Fair Use provisions.

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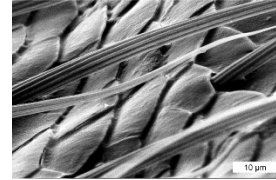
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