



Glow Scope

Why in News?

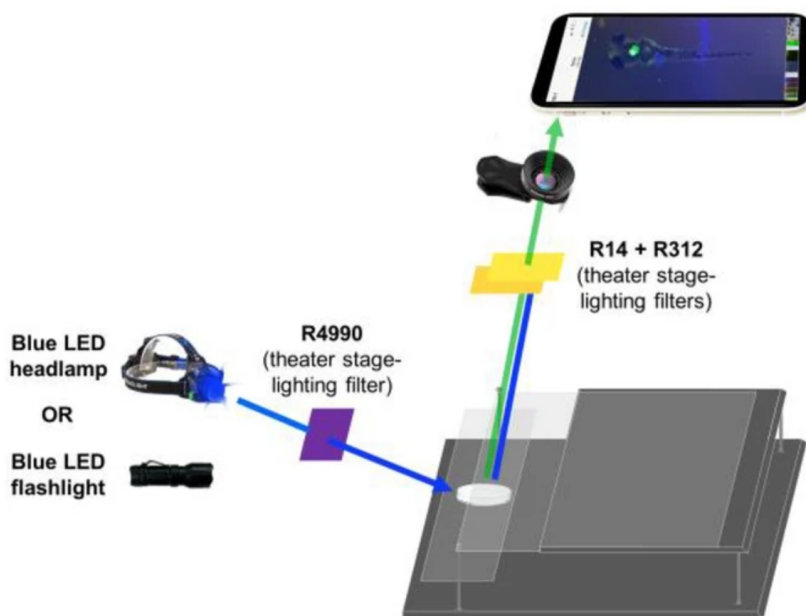
Researchers at Winona State University, Minnesota, have created a design for a **Glow Scope, a Fluorescence [Microscope](#)**.

- With this setup, they were able to **image the creatures' brain, spinal cord, heart, and head and jaw bones**.
- They were able to zoom in and out using the smartphone camera and the clip-on lens.

What is Fluorescence Microscopy?

- **About:**
 - An **optical microscope** views an object by studying how it **absorbs, reflects or scatters visible light**.
 - A fluorescent microscope views an object by **studying how it reemits light that it has absorbed**, i.e., how it fluoresces. This is its **basic principle**.
 - The object is illuminated with light of a specific wavelength. Particles in the object absorb this light and reemit it at a higher wavelength. These particles are called **fluorophores**; **the object is infused with them before being placed under the microscope**.

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Is the Glowscope Accessible?

- Using a 'glowscope' still requires **access to fluorophores, suitable biological samples, the know-how to combine the two**, and some knowledge of physics to work out which LED

flashlight to buy.

- The Foldscope was truly remarkable **because all its required components were simple to understand.**
 - **In 2014**, a group of scientists at Stanford University released Foldscope, a handheld microscope made almost entirely out of paper, which **takes 30 minutes to put together, and which could capture images of cells.**
- However, the fact that a simple fluorescent microscope can be set up for a few thousand rupees means, instead of being entirely out of reach, researchers can prepare samples and take them to schools, where students can observe them.

[Source: TH](#)

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