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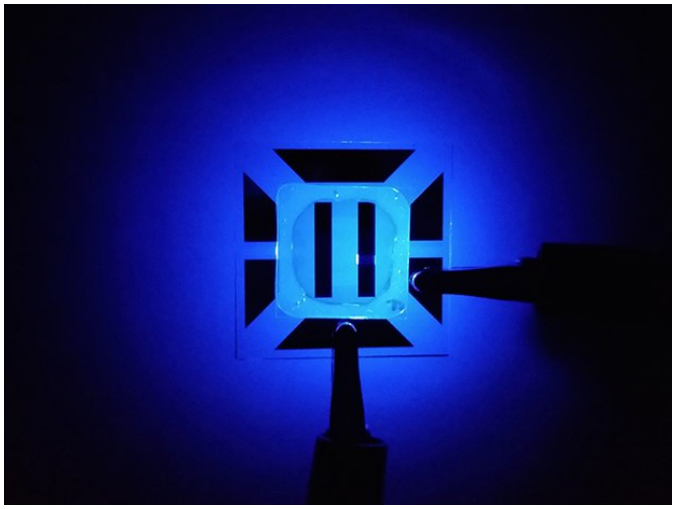
The irresistible urge to swipe left or right between things might be key to improve the OLED displays of the future, Harvard researchers say-- a so-called "Molecular Tinder" process allows for easier discovery of blue-light emitting molecules.



Developed in collaboration with MIT and Samsung, the process first combines chemistry, machine learning and cheminformatics to quickly identify molecules able to potentially produce blue light. Once the machines make their findings human beings take over, as a team of collaborators goes through the best results using a web application similar to the popular online dating app.

But why are the researches looking for blue light? OLEDs build images using red, green and blue subpixels, but blue is actually difficult to produce using current technology, so much so it requires the use of expensive metals such as iridium. If the colour can be produced solely through molecules, the researchers say, it can lead to cheaper and longer lasting OLEDs.

So far the Harvard team has choice of hundreds of molecules able to theoretically perform as well as (if not better than) state-of-the-art metal-free OLEDs. Now the next step is to physically go through said molecules and check out the results, which should hit the industry some time over the next few years.

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