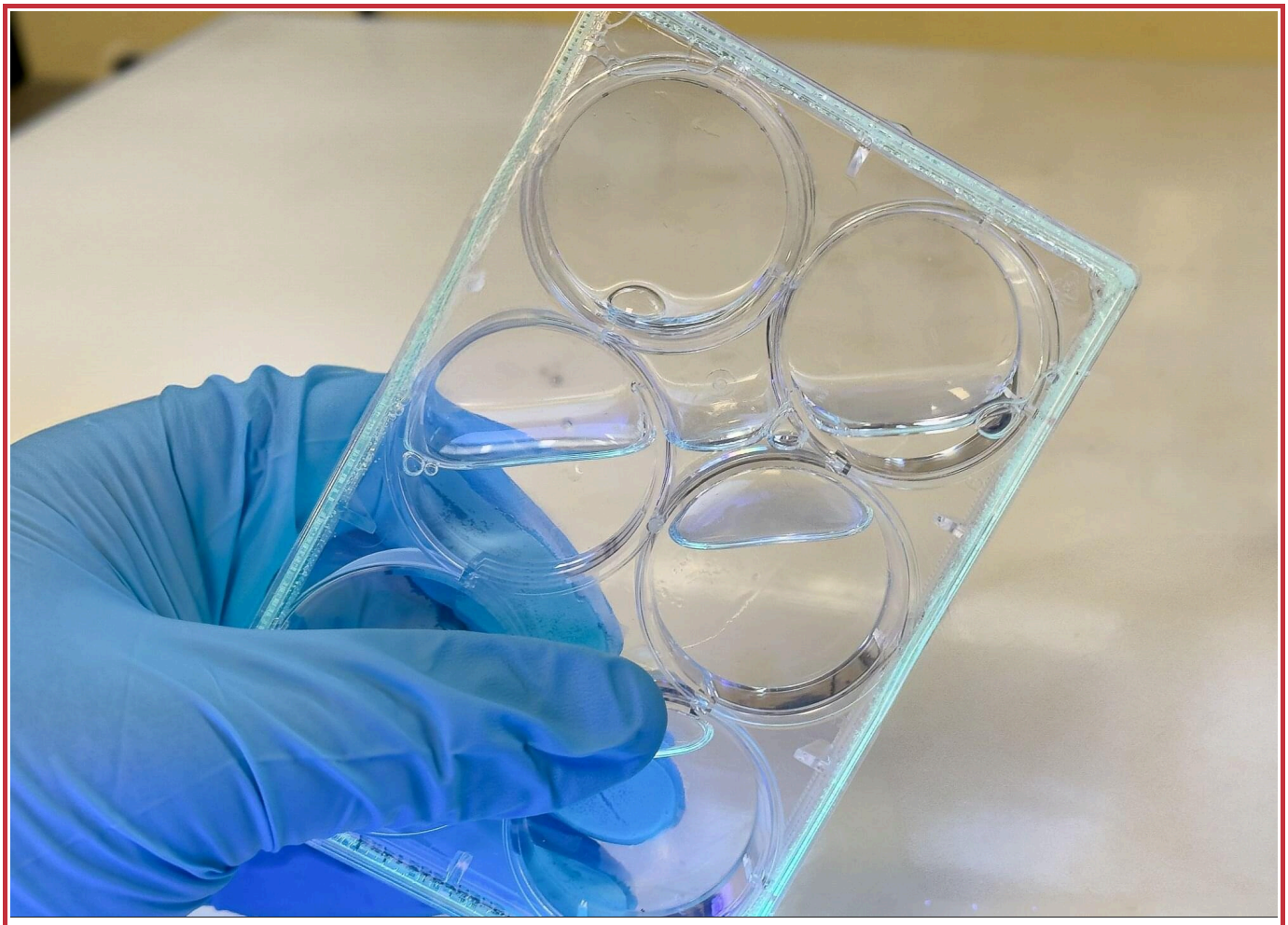
Blog



Oct 23
2026

Nontoxic ‘light-activated’ compound shows promise for safer 3D printing of advanced biomaterials

Scientists from Nanyang Technological University, Singapore (NTU Singapore) have developed a new class of light-activated compounds that could lead to safer and more versatile applications in 3D printing, cosmetics and medicine.

These compounds, known as aryl diazirine photoinitiators, are used to solidify liquid resins into hard plastics with speed and precision using light. The current industry-standard photoinitiators often face issues of toxicity and poor solubility in water.

The NTU study, published in *NPG Asia Materials*, demonstrates that the new aryl diazirine photoinitiators are not only nontoxic to human cells but also offer superior performance, including reduced material shrinkage and compatibility with water-based sustainable resins. The paper is titled “Non-toxic aryl diazirine photoinitiators.”

Posted by Saúl Morales Rodriguéz in 3D printing, biotech/medical

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