

RECYCLABLE PHOTORESINS FOR LIGHT-MEDIATED ADDITIVE MANUFACTURING TOWARDS LOOP 3D PRINTING

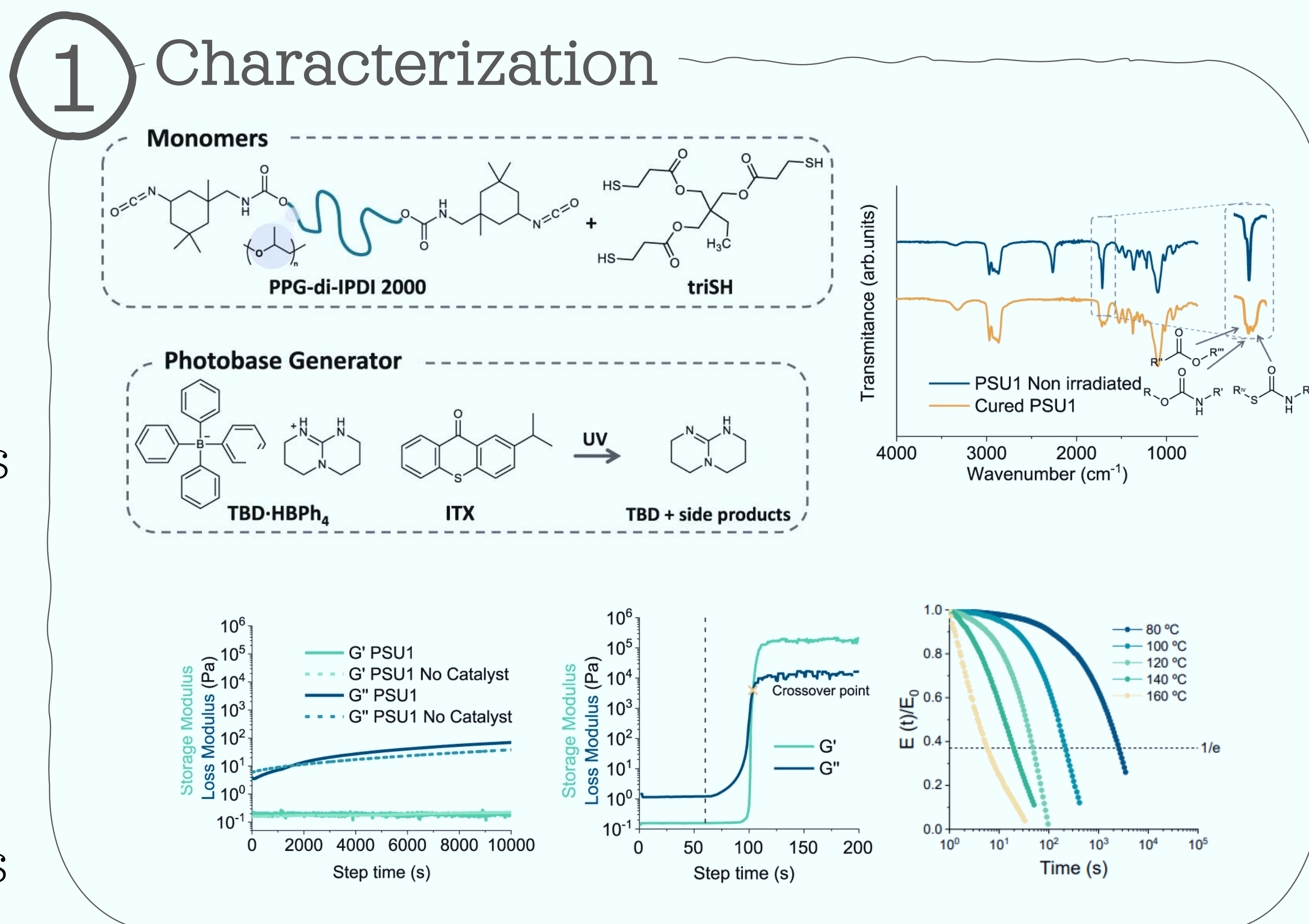
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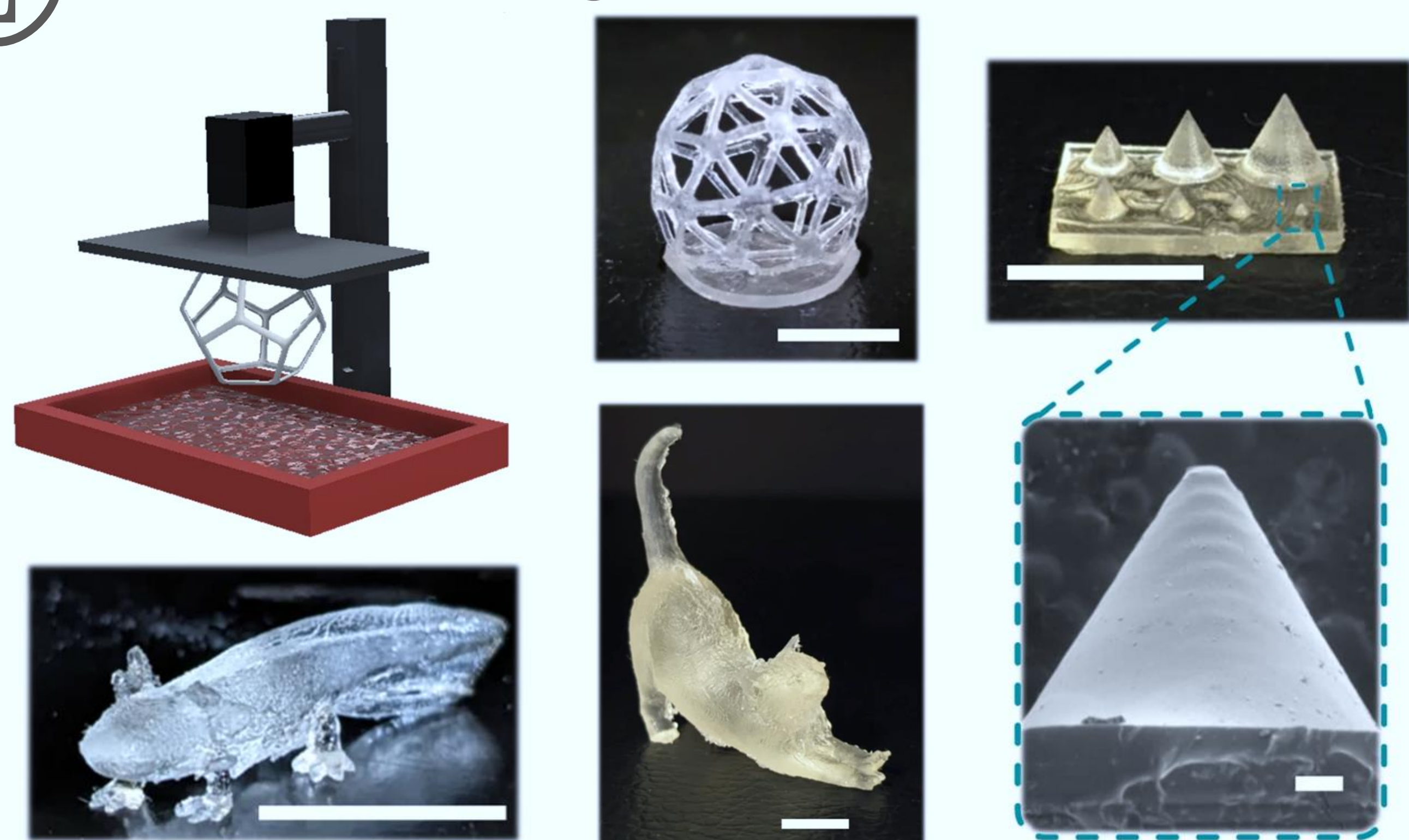
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Additive manufacturing (AM) allows the creation of complex structures for various applications. Among its techniques, **vat photopolymerization (VP)** stands out for its efficiency, high surface quality, and micron-scale resolution. However, most VP resins are not recyclable.



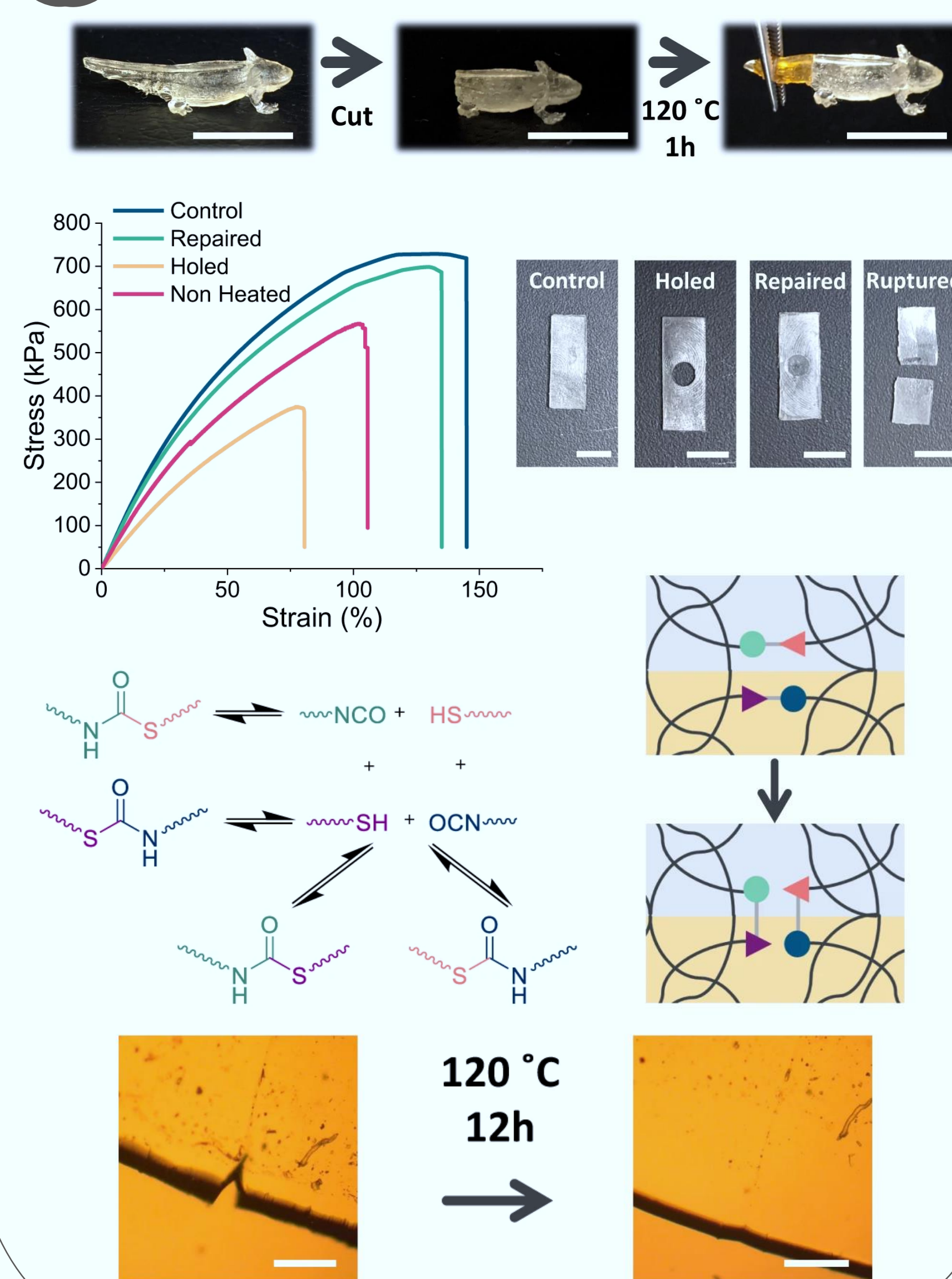
Scheme and characterization of polythiourethane system

2 DLP 3D Printing



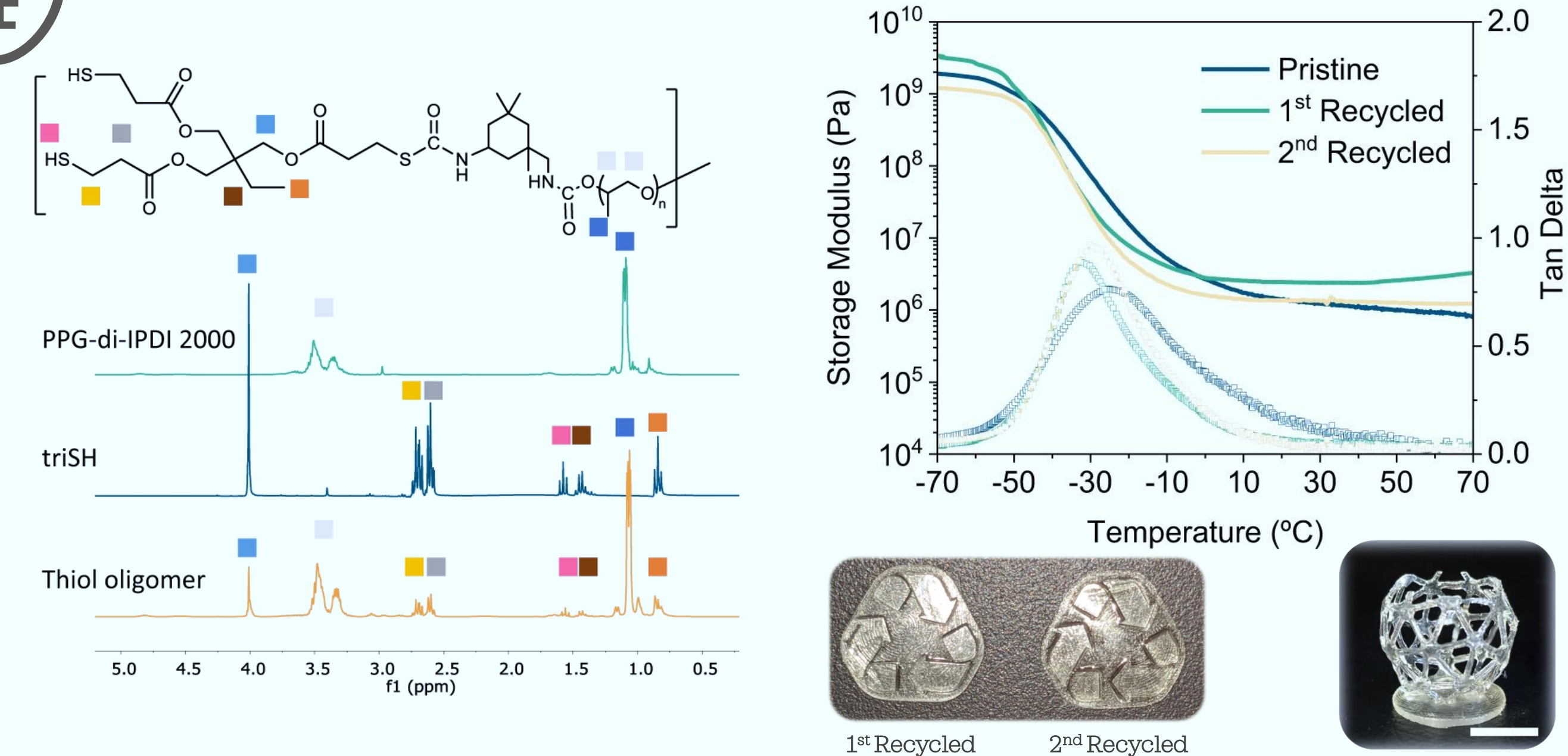
3D printing of PSU materials

3 Repairing of PSU



Repairing of PSU materials

4 Closed-loop recycling

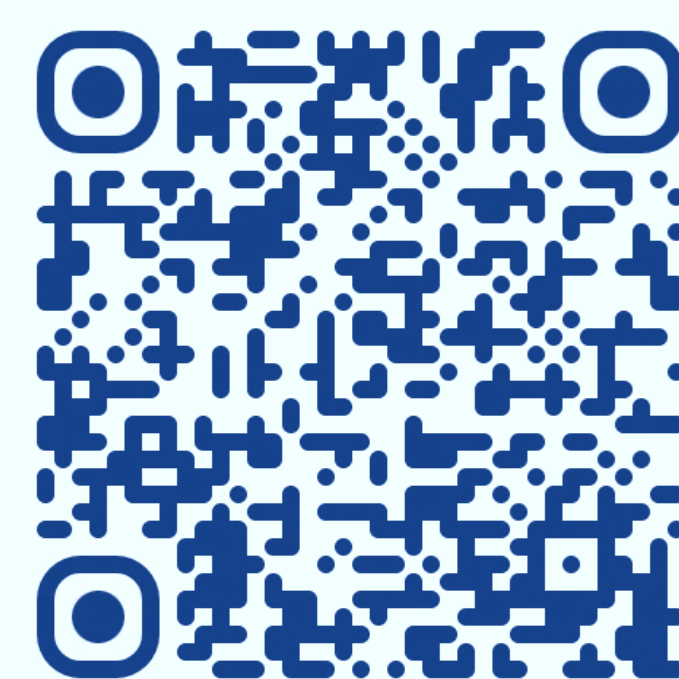


Close-loop recycling of 3D printed polythiourethanes

References

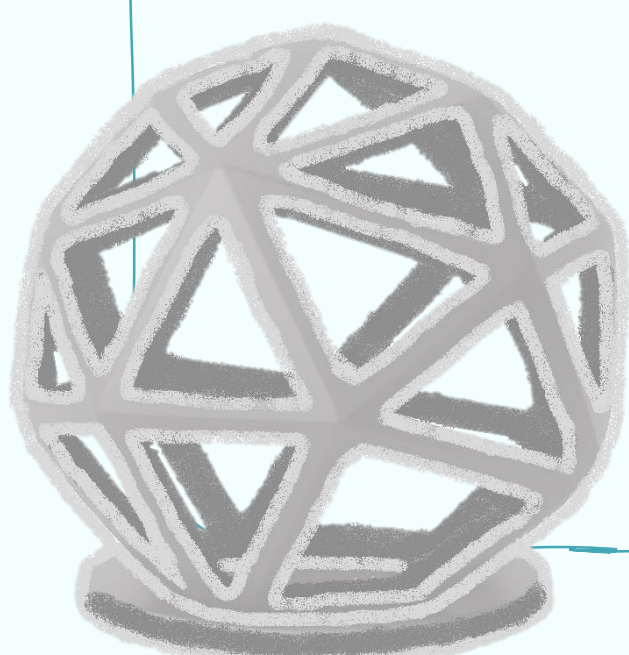
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Acknowledgments



More information

Here, we present a **recyclable resin** based on **polythiourethane** chemistry, enabling fast printing, reprinting, reshaping, and repair. This approach supports a **closed-loop, sustainable 3D printing process**, demonstrated via DLP printing.



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