# Article information:

Rapid fabrication of physically robust hydrogels | Nature Materials
<https://www.nature.com/articles/s41563-023-01648-4>

# Article summary:

1. Hydrogels are promising materials for various applications due to their biocompatibility and ability to maintain their structure. However, most hydrogels are mechanically weak and brittle, limiting their practical use.

2. Recent advances in hydrogel design, such as double-network (DN) hydrogels, have improved their mechanical properties by incorporating sacrificial bonds. However, there is still a trade-off between toughness and strength in these hydrogels.

3. The challenge lies in reconciling the conflict between mechanical performance and processability. Conventional photocuring hydrogels offer fast preparation but lack mechanical strength, while tough/strong hydrogels require lengthy preparation times. Achieving both fast preparation and high mechanical performance remains a challenge in the field of hydrogel materials.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

根据文章内容，可以看出作者对于水凝胶的机械性能和加工性能存在一些偏见和片面报道。首先，作者认为大多数水凝胶在机械强度上较弱且脆性，但最近的研究已经显著改善了它们的机械性能。然而，文章没有提供足够的证据来支持这一观点，并且没有提及其他可能存在的高强度水凝胶材料。

其次，文章指出传统的光固化水凝胶具有快速制备和良好可加工性的优势，但却在机械性能上表现不佳。然而，文章没有提供充分的证据来支持这一观点，并且未探讨其他可能存在的具有高机械性能的光固化水凝胶材料。

此外，在介绍自然界中具有优异力学性能的复合材料时，文章没有平等地呈现双方。虽然作者提到了这些材料中微结构界面的重要性，但并未探讨其他可能影响其力学性能的因素。

总体而言，该文章存在着对水凝胶材料机械性能和加工性能问题进行片面报道、缺乏充分证据支持的问题。此外，文章未探讨其他可能存在的高机械性能水凝胶材料，并未平等地呈现双方观点。因此，读者需要对该文章中提出的观点保持谨慎，并进一步研究和了解相关领域的最新发展。

# Topics for further research:

* 高强度水凝胶材料
* 具有高机械性能的光固化水凝胶材料
* 复合材料中其他影响力学性能的因素
* 水凝胶材料的机械性能改进研究
* 水凝胶材料的加工性能改进研究
* 水凝胶材料的最新发展

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