# Article information:

3D recycled mortar printing: System development, process design, material properties and on-site printing - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S2352710220334124?via%3Dihub>

# Article summary:

1. A 3D printing system was developed to improve the printing qualities of recycled mortar.

2. The properties of printing mortars with/without recycled sand were studied and a successful on-site printing of a 2.5 m x 2.5 m x 3 m room was achieved.

3. Results showed that replacing natural sand with 25% of recycled sand caused higher green strength and no obvious decrease in hardened mechanical properties.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “3D Recycled Mortar Printing: System Development, Process Design, Material Properties and On-Site Printing” is an informative piece that provides an overview of the development of a 3D printing system for recycled mortar, as well as the process design and material properties associated with it. The article is written in a clear and concise manner, making it easy to understand for readers who are not familiar with the topic. The authors provide evidence to support their claims by citing relevant research studies throughout the article, which adds credibility to their arguments.

However, there are some potential biases in the article that should be noted. For example, the authors focus mainly on the advantages of using recycled materials in 3DCP without exploring any potential risks or drawbacks associated with this approach. Additionally, while they mention that real-time monitoring systems and continuous printing are necessary for higher quality and efficiency, they do not provide any further details or evidence to support this claim. Furthermore, while they discuss how replacing natural sand with 25% of recycled sand can lead to higher green strength and no obvious decrease in hardened mechanical properties, they do not explore other percentages or ratios that could potentially yield different results.

In conclusion, while this article provides an informative overview of 3D recycling mortar printing technology and its associated processes and materials properties, there are some potential biases that should be taken into consideration when evaluating its trustworthiness and reliability.

# Topics for further research:

* Potential risks of 3DCP with recycled materials
* Continuous printing for 3DCP
* Real-time monitoring systems for 3DCP
* Different ratios of recycled sand for 3DCP
* Impact of recycled sand on green strength
* Hardened mechanical properties of 3DCP with recycled materials

# Report location:

<https://www.fullpicture.app/item/2e38b56852bf54296e02e3d06bd806bd>