

# Sugar-fueled Dissipative Living Materials

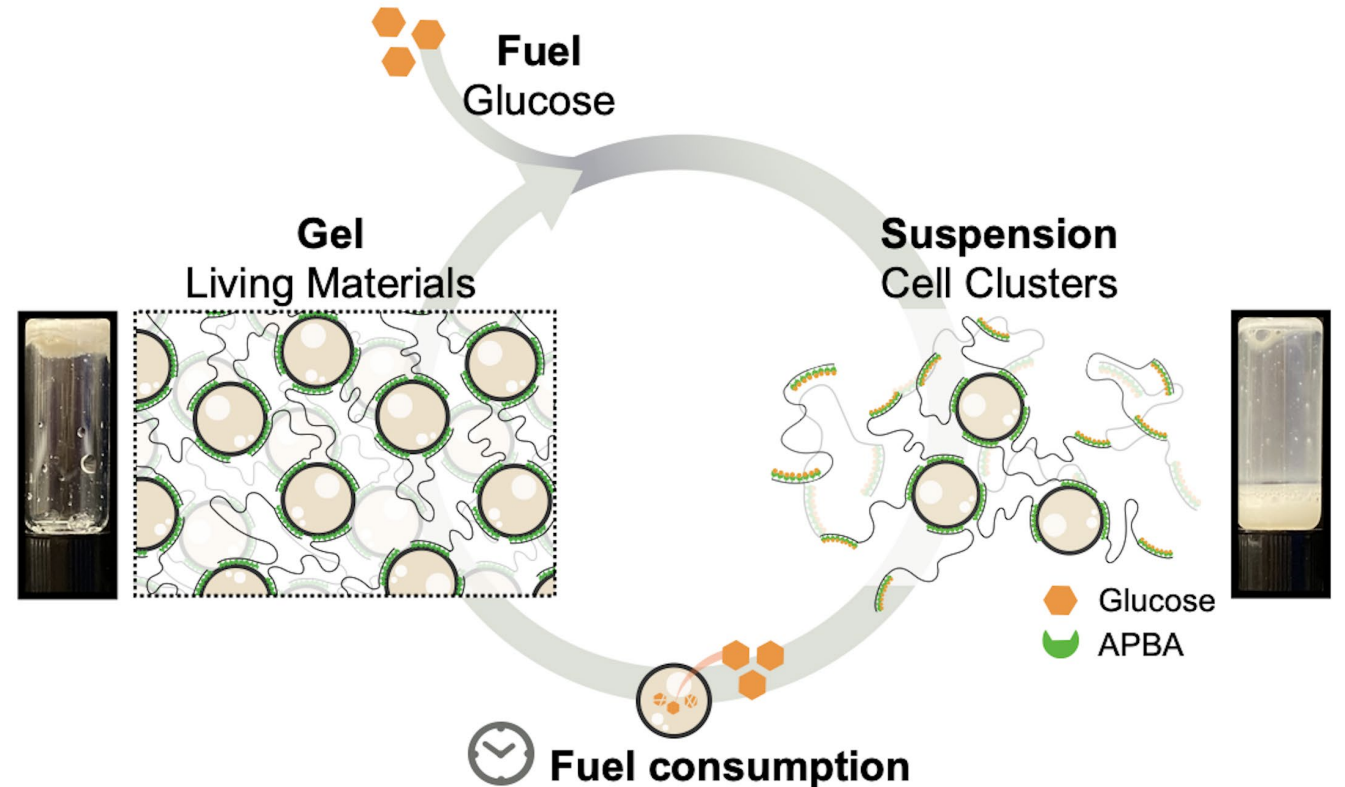
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## This paper reports:

- The first example of synthetic living material featuring dissipative behaviors directly controlled by the fuel consumption of their constituent cells
- A synthetic dissipative system that interfaces biology and shows repeated macroscopic phase transition
- Detailed examination of kinetics of fuel consumption by living cells at a molecular level

## Impact:

- This work significantly expands the scope of dissipative materials by bringing it one step closer to integration with biology.
- This work provides a new tool and knowledge to design synthetic dissipative systems with living cells.



Jo H, Selmani S, **Guan Z**, **Sim S**, "Sugar-Fueled Dissipative Living Materials" *Journal of the American Chemical Society*, **145**, 1811-1817 (2023). <https://doi.org/10.1021/jacs.2c11122>