

Showcasing research from Professor Meng's laboratory, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China.

## Acoustic enrichment of sperm for in vitro fertilization

We have developed a novel acoustofluidic device that leverages acoustic streaming to efficiently enhance enrichment of sperm to oocyte surface, facilitating fertilization with moderate oligozoospermia. The results show that ultrasound enables to significantly improve the sperm motility without leading to additional DNA fragmentation. Moreover, sperm and oocytes that have been exposed to ultrasound stimulation show a higher fertilization rate and faster progression into the multicellular state through earlier proliferation. This research offers a potentially valuable tool for *in vitro* fertilization and has important implications for assisted reproduction technology.





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