

# Environmental Science: Atmospheres

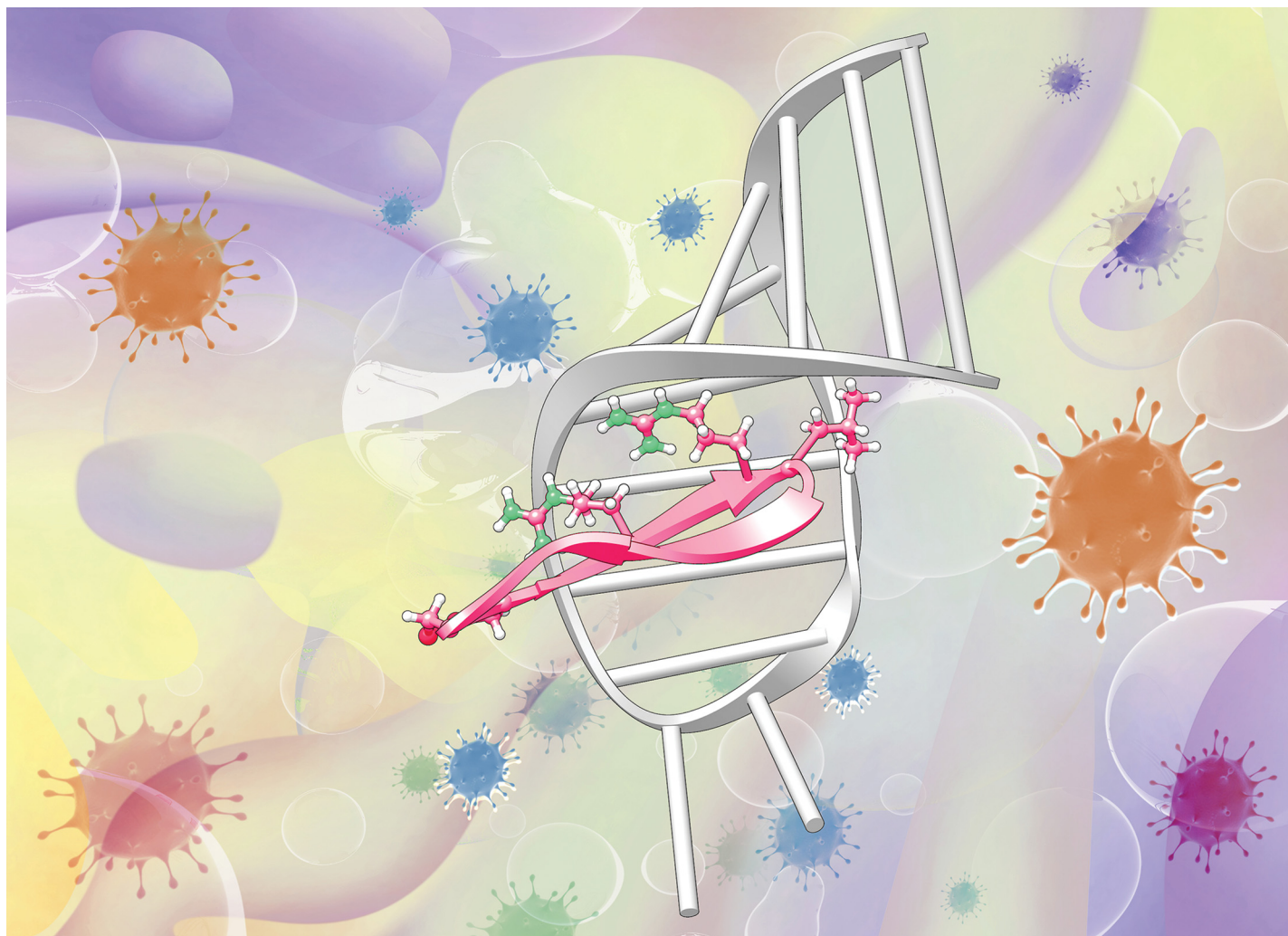
GOLD  
OPEN  
ACCESS

Connecting communities  
and inspiring new ideas

[rsc.li/submittoEA](https://rsc.li/submittoEA)

Fundamental questions  
Elemental answers





**Showcasing research from the Group of Prof. Yunjie Zhao  
at Central China Normal University, China**

**Dynamic geometry design of cyclic peptide architectures  
for RNA structure**

This work integrates the computational and experimental methods to design cyclic peptide inhibitors for RNA targets. We started by applying graph-based tree decomposition and energy-based dynamical network algorithms to design the inhibitor. Next, we conducted NMR experiments to validate the computational prediction. The cyclic peptide inhibitors we designed have a higher binding affinity for RNA targets than existing RNA inhibitors, with low micromolar binding affinity. The present work can provide valuable guidelines for RNA engineering in biological and medical applications.

**As featured in:**



See Zhou Gong, Yunjie Zhao *et al.*,  
*Phys. Chem. Chem. Phys.*,  
2023, **25**, 27967.