

EES Catalysis

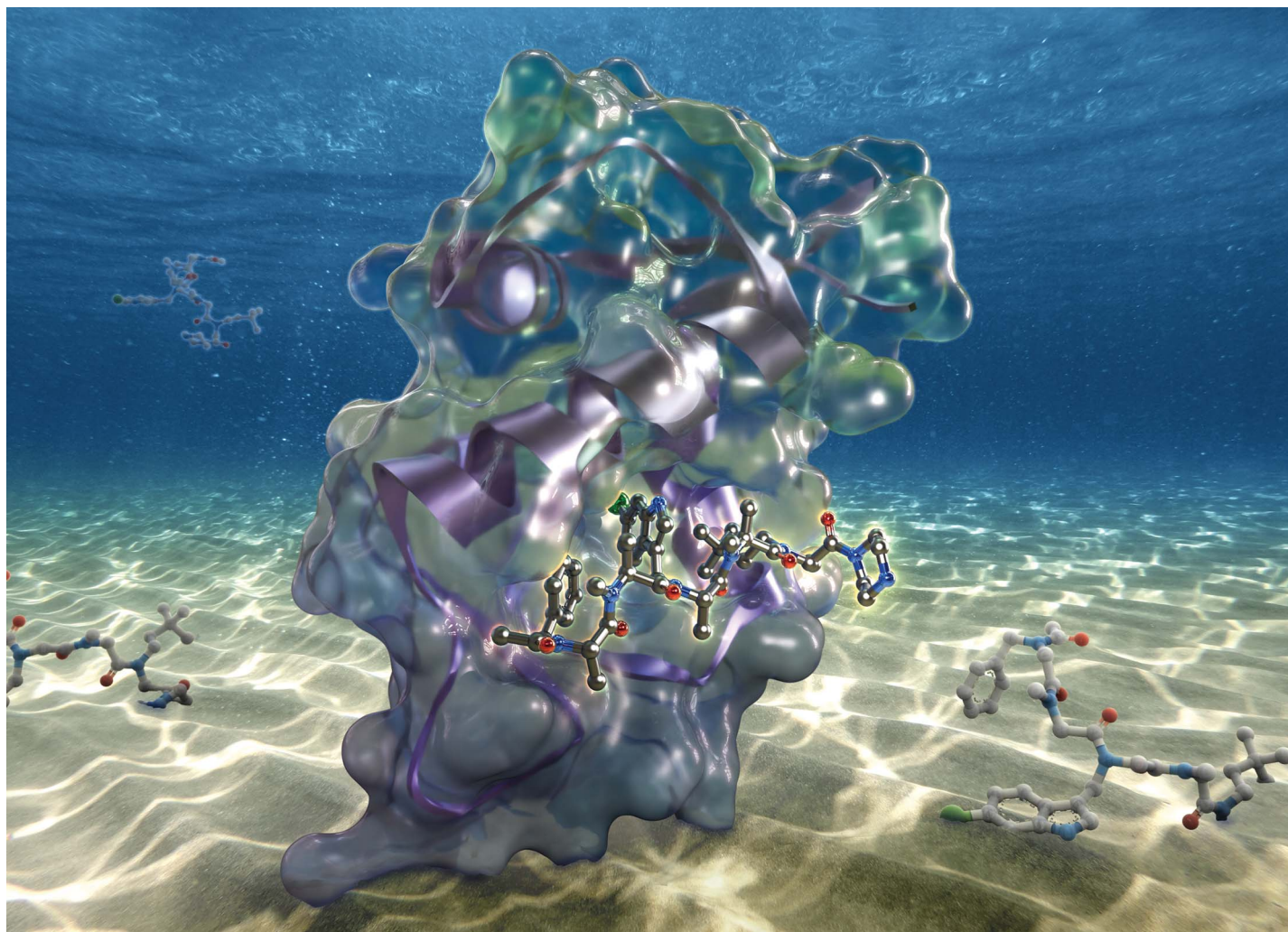
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Fundamental questions
Elemental answers



Showcasing research from Professor Shinsuke Sando's laboratory, School of Engineering, The University of Tokyo, Tokyo, Japan.

A high-resolution structural characterization and physicochemical study of how a peptoid binds to an oncoprotein MDM2

This study provides the first high-resolution structure of a peptoid oligomer bound to a protein. The structure of the peptoid bound to the oncogenic protein MDM2 revealed that the peptoid's main chain acts as a scaffold, and the interaction with the protein is mainly mediated by the interactions of the *N*-substituents. Additionally, this study demonstrates that rigidifying the peptoid's conformation enhances protein binding affinity by increasing the binding enthalpy, accelerating the association rate, and reducing the dissociation rate.

As featured in:



See Jumpei Morimoto, Shinsuke Sando *et al.*, *Chem. Sci.*, 2024, 15, 7051.