



Showcasing research from Woon Ju Song's laboratory,
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Symmetry-related residues as promising hotspots for
the evolution of *de novo* oligomeric enzymes

The article addresses an efficient strategy to perform directed evolution of *de novo* oligomeric enzymes. Sequence optimization selectively aimed at the symmetry-related residues, such as the ones located at the rotational axes, yielded a quadrupole mutant of a tetrameric metallo- β -lactamase. Despite their long distances to the active sites, mutations at the symmetry-related residues have produced significant enhancements in catalytic activities and substantial alterations in the structure of the active site, implicating that the beneficial mutations might have propagated via their global symmetry.

As featured in:



See Woon Ju Song *et al.*,
Chem. Sci., 2021, 12, 5091.