Abstract
The synthesis of molecular systems with atomic precision for a specific application constitutes a fundamental challenge of molecular engineering. Development of the ability to construct complex biomolecular architectures will provide a solution to overcome this obstacle. Genetically encoded click chemistry, e.g. SpyTag-SpyCatcher chemistry, which can covalently link two protein molecules together with high specificity and efficiency, enables precise control over macromolecule topology, synthesis of bioactive biomaterials, design of improved biocatalysts, and biomolecular imaging, thus representing a powerful tool for molecular engineering.

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