

Sequence specific synthesis of DNA-chromophore architectures as light harvesting systems

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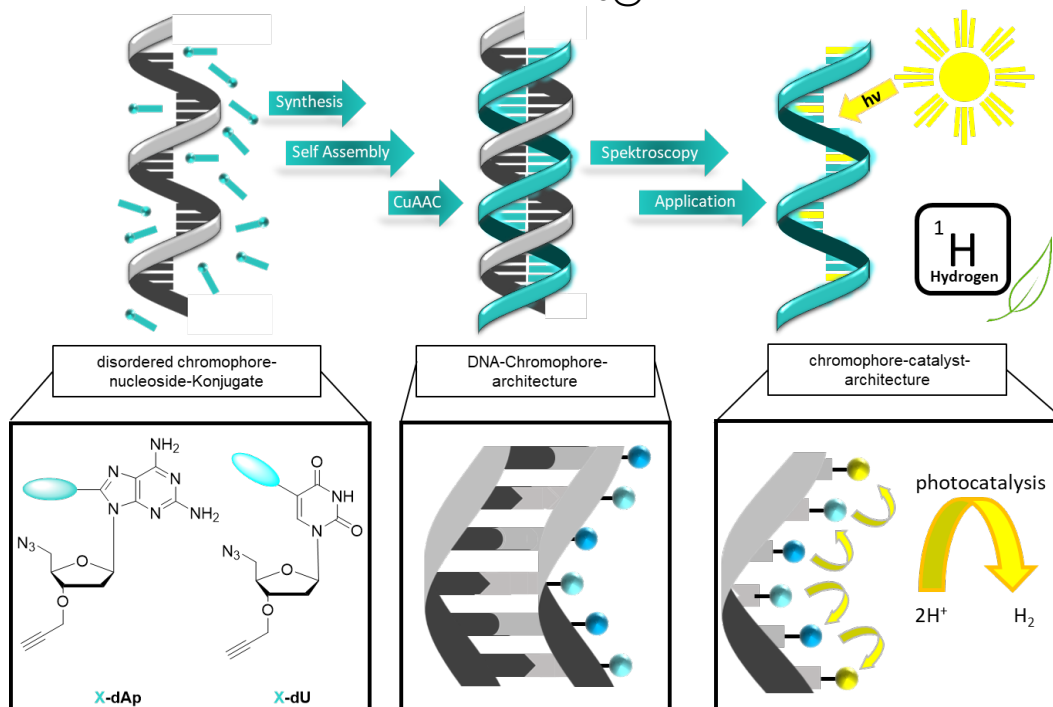


Figure 1 sequence-specific assembly of disordered chromophore nucleoside conjugates (**left**) to defined DNA chromophore architectures (**center**) and the planned use as a light harvesting system (**right**).

Organic light harvesting systems will play an important role in securing the global demand for renewable energy. The aim is to make full use of the solar spectrum possible and to provide access to green hydrogen in conjunction with suitable photocatalysts.

Due to the canonical base pairing, DNA offers itself as a structure-giving template to ensure a precise arrangement of the chromophores and thus a cost-effective generation of such functional structures. A fixation of the chromophores in the self-assembled sequence via a biocompatible triazole backbone has not yet been realized. This is the next and decisive step towards new, stable light harvesting systems.

References:

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