

Tailoring Peptide Self-Assembly with Electron Donor Functionalization Towards Formation of Vesicles, Helical Ribbons, and Fibers

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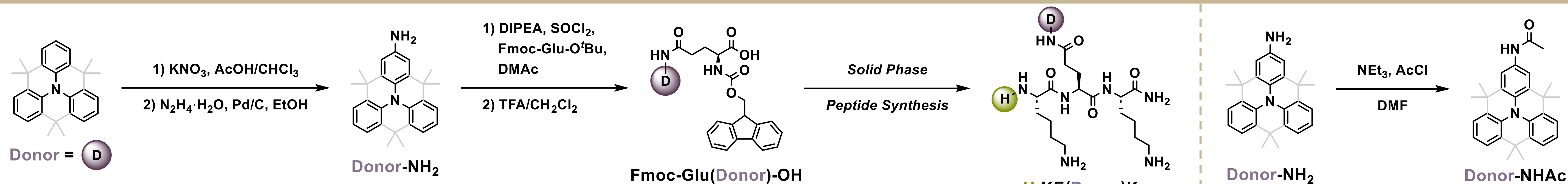


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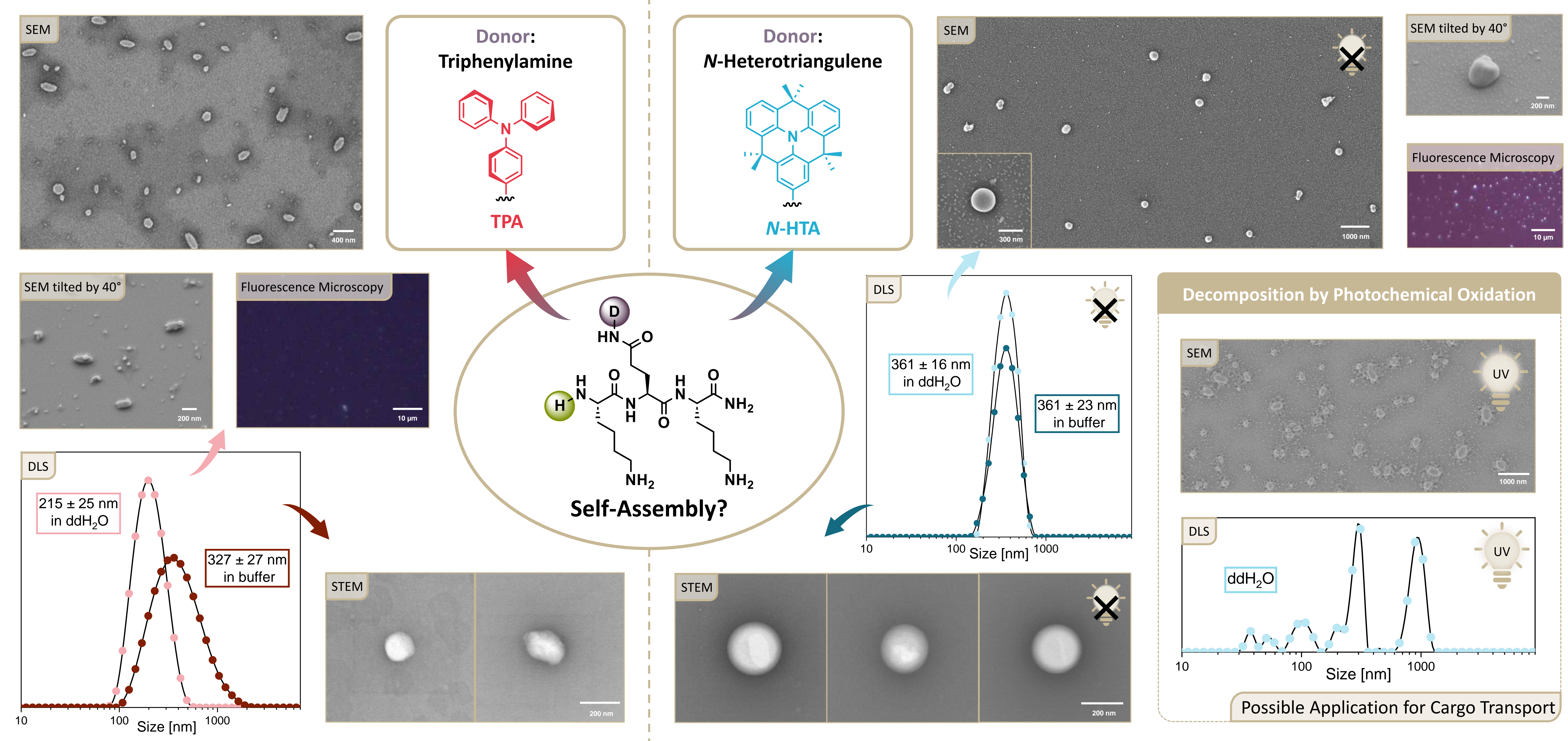
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Studying the self-assembly of peptides is of high interest for research and medical applications. Different short peptides have already shown self-assembly into distinct morphologies ranging from ribbons to vesicles. Here, we present a set of tripeptides, functionalized with nitrogen-containing electron donors, introducing tunable (opto-)electronic properties. Our tripeptides show self-assembly in aqueous solution and were characterized by fluorescence spectroscopy, cyclic voltammetry, dynamic light scattering, fluorescence and electron microscopy. Additionally, one of the presented tripeptides shows promise for cargo transportation in aqueous media as irradiation with UV-light led to decomposition of the formed vesicles.

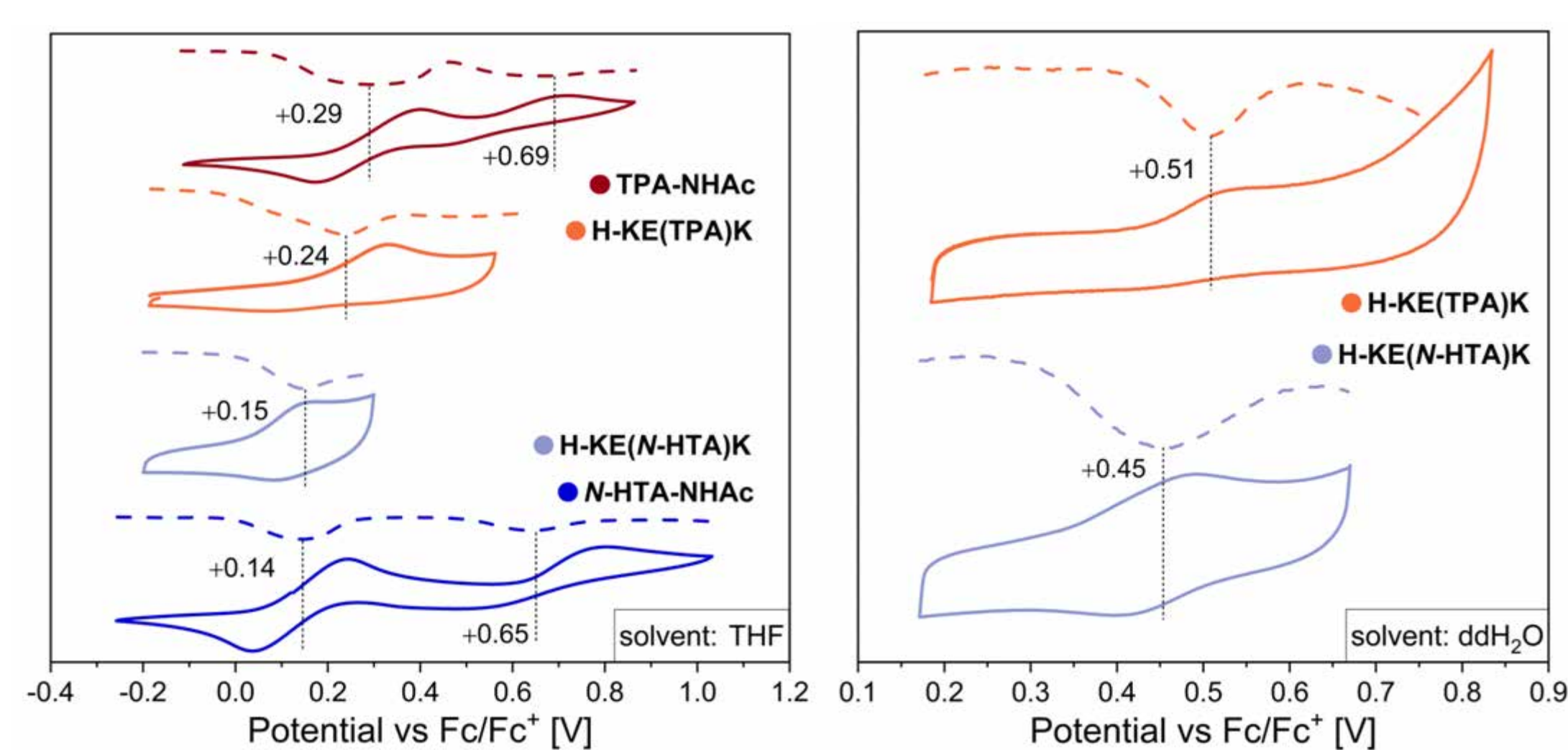
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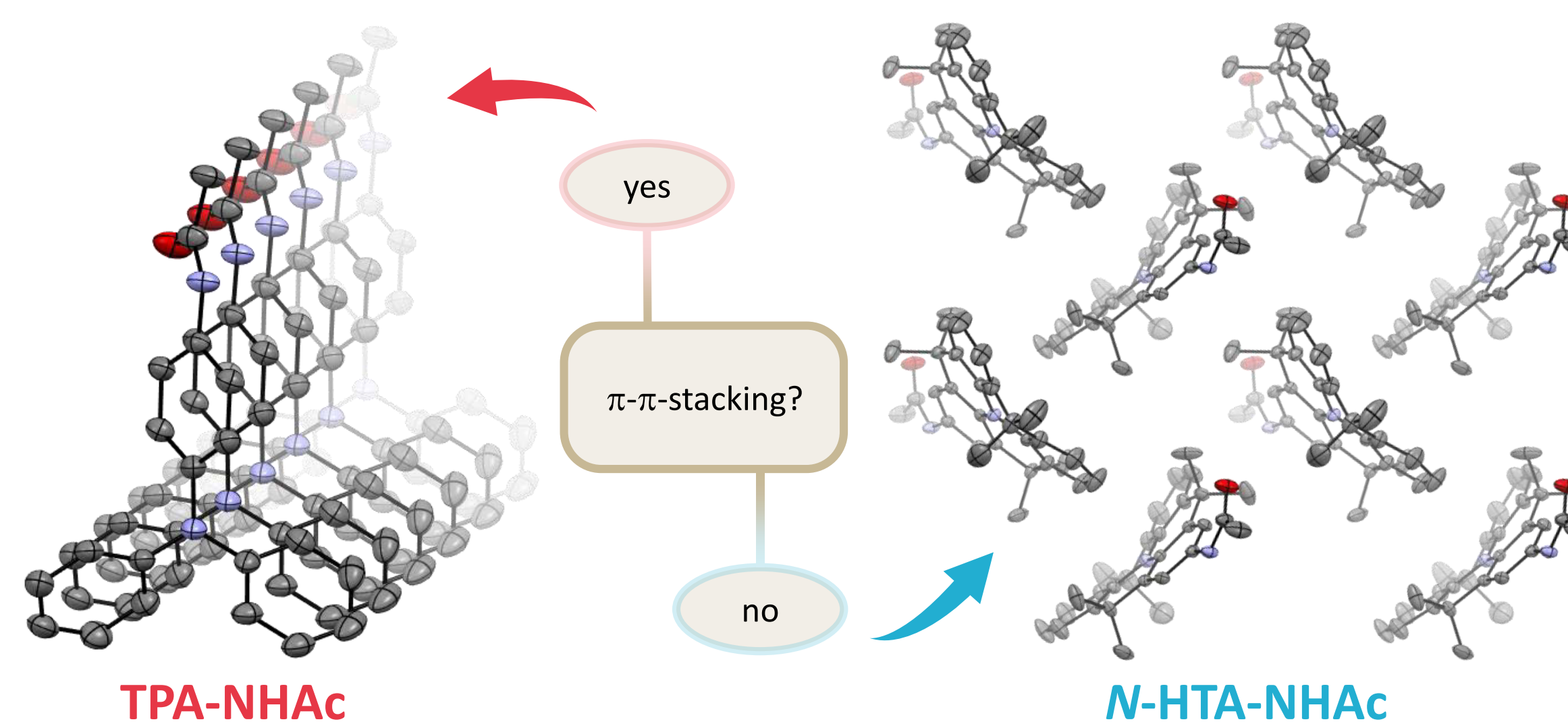
Self-Assembly



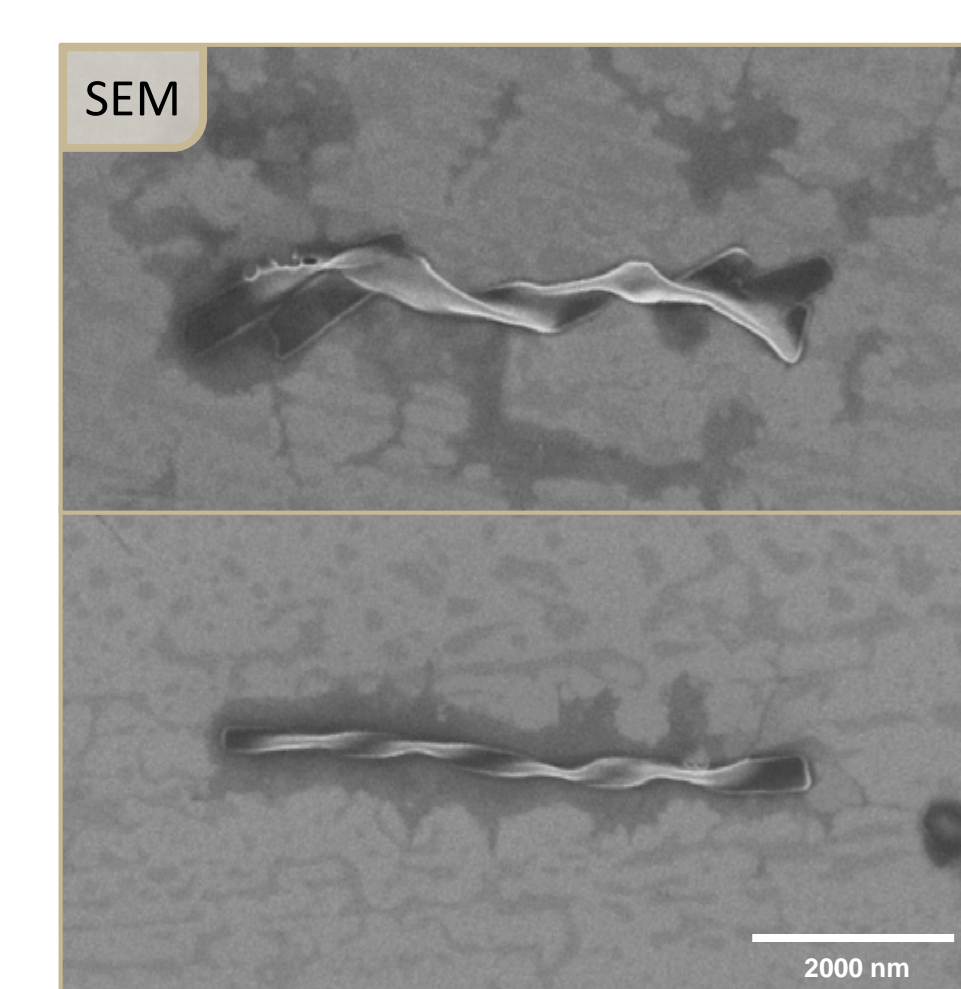
Cyclic Voltammetry



X-Ray Analysis



Sneak Peak



References

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