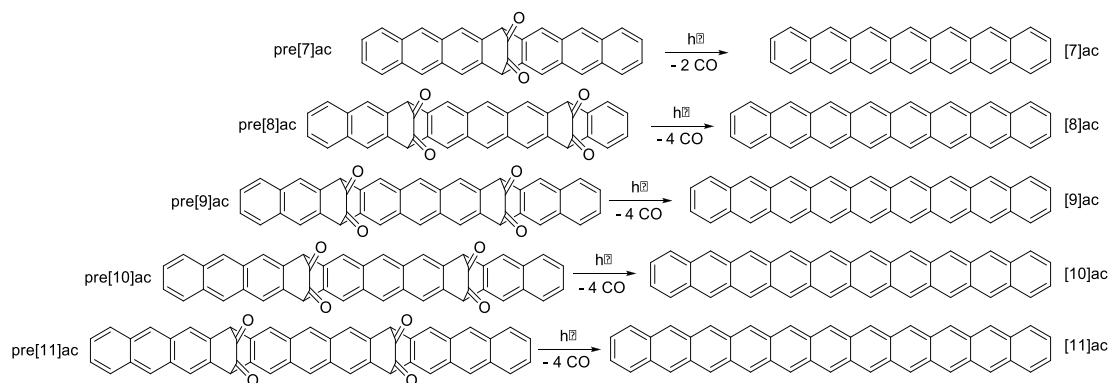


# The Acene Series: Narrowest Zig-Zag Graphene Nanoribbons

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Acenes [n]ac, consisting of linearly fused benzene rings, are important materials for organic electronics and are currently in the focus of materials research.<sup>[1]</sup> Reactivity increases among the acene series significantly with length,<sup>[2]</sup> causing instability for acenes longer than hexacene.



The acenes beyond hexacene are assumed to be notoriously unstable,<sup>[3]</sup> but are valuable for studying the transition from stable organic molecules to zig-zag graphene nanoribbons that may be metallic in the limit of infinite length. To allow experimental investigations of larger acenes,<sup>[4]</sup> we have developed synthetic access to acenes up to undecacene [11]ac.<sup>[5]</sup> We report on the properties of those higher acenes, in particular with respect to their optical and magnetic properties.

## References

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