CHEM2Dmac September 03-06, 2019 • Dresden, Germany European conference on Chemistry of Two-Dimensional Materials

Merging Twisted Aromatics and Framework Materials

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Polycyclic aromatic hydrocarbons (PAHs) are receiving a great deal of attention because of their increasing performance in organic electronic applications.^[1] In general, PAHs are planar structures but they can adopt twisted conformations as the result of the steric strain induced by overcrowding or congestion in key positions of the aromatic core. Distorted PAHs have shown enhanced solubility and unique optoelectronic and chiroptical properties as an effect of their distorted molecular structure.

We have implemented several strategies that provide access to distorted PAHs into the preparation of non-planar organic frameworks.^[2,3,4] The most recent advances of these distorted 2D materials including synthetic routes, optoelectronic properties, self-organising properties, and potential applications will be discussed.

References

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