EASILY TRANSFERABLE POLYDOPAMINE FILMS: FUNCTIONAL HYBRID HETEROJUNCTIONS ON DEMAND

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Until recently, polydopamine (PDA) was mainly applied as a surface initiator for several biomedical applications and as a "sticky" active component sensing platform. However, several previously overlooked properties of PDA have been coming to light as research on this material continues. Here, I will mainly focus on the role of PDA coatings in energy applications, such as their apparent universal role as photosensitizers and their behaviour when in contact with a semiconductor [1]. I will introduce some of the physicochemical aspects that make PDA an ideal coating for many photocatalytic applications, including results on various semiconducting materials and nanostructures [2]. Also, I will present some of the recent findings and theories on the origin of this behaviour, as well as some novel PDA architectures based on 2D-like PDA free-standing films [3].

References

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