

Proteins: A Material-Science Point of View

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Proteins form the very basis of life. They regulate a variety of activities in all known organisms, from replication of the genetic code to transporting oxygen, and are generally responsible for regulating the cellular machinery and determining the phenotype of an organism.

From a material-science point of view, proteins can serve as excellent building blocks for the development of new structures, composites, and devices. In this talk I will describe some of our efforts in this direction. Specifically I will address the followings:

- (i) Engineered Light-emitting bio-materials,
- (ii) Control over the electrical properties of nano-sized junctions via “natural” site-controlled doping of proteins monolayers,
- (iii) Bioinspired photovoltaic cells(iv)

References

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