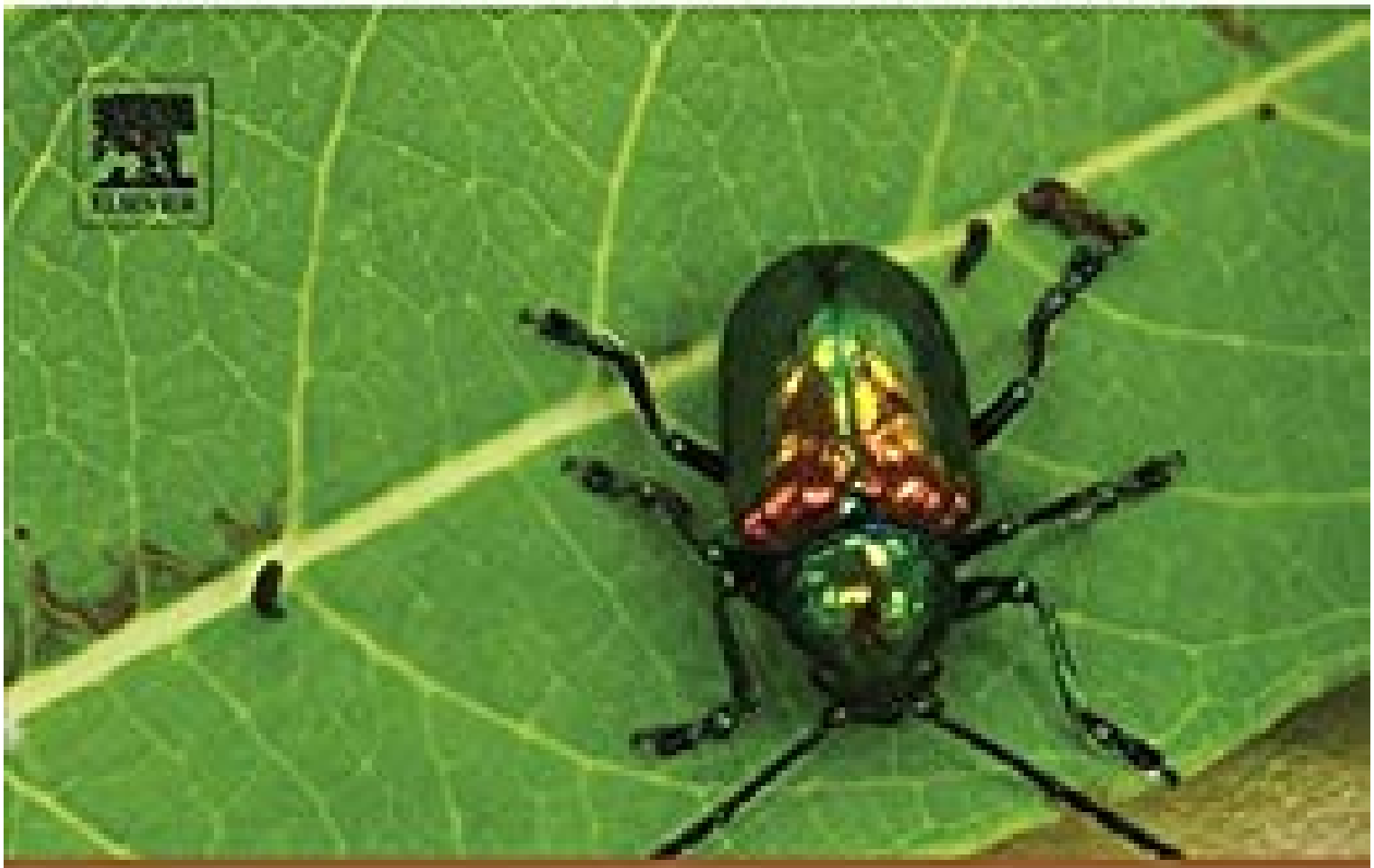

Engineered Biomimicry

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Engineered Biomimicry: Chapter 8. Surface Modification for Biocompatibility

The principal motivation behind surface engineering and modification for improved biocompatibility of a biomaterial is to regulate interactions of the biomaterial with the different parts of living systems or subsets thereof in a fashion that mimics the normal physiological state or produces a desired change in biological state. This pursuit of biomimicry is talked about in this chapter within the context of the core mechanisms of the biological response to materials. These targets include water wettability (surface energy), surface area chemistry, surface chemical substance patterns and surface area textures, and surface demonstration of biomimetic motifs. A tutorial on areas, interfaces, and interphases prospects to the identification of particular targets for surface engineering and modification. The chapter concludes with a dialogue of the essential conceptual tools necessary for creating a biomaterials surface technology laboratory, illustrated with a good example of modifying areas for improved cardiovascular biomaterials.