

THE MATERIAL SCIENCE OF COSMETICS

Prithwiraj Maitra, Research Director & Fellow. Johnson & Johnson
USA-PMaitra@its.jnj.com

Cosmetic are products that are designed to maintain or improve visual appearance when applied to skin. Skin is a substrate that is mechanically flexible and changes occur in physio-chemical during the course of the day. Sebum, perspiration, as well as environmental insults work counter to the desired benefits of cosmetics on physical appearance. This review will discuss material science aspects of skin focusing on biomechanical properties, surface and optical properties on skin and design criteria to optimize optical properties of make-up for flawless natural appearance. This review will also provide examples of material science considerations for designing sunscreen and anti-aging solutions. Recent advances on bioinspired materials in designing solutions for unmet cosmetic needs will also be highlighted.