

Light Activated Tissue Regeneration and Therapy

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Please contact me with any corrections

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NOVEL FIBER-OPTIC BIOSENSORS

Richard Claus, Virginia Tech

Nanotechnology + Optical Fiber Sensors

- Design and synthesize self-assembly precursors
- Review of the electrostatic self-assembly process = layer by layer assembly
 - Take substrate and cleaned, then has a net charge, usually negative, dipped into an aqueous solutions containing cationic polymers with positively charged molecular segments, which form a monolayer of the substrate surface, self-limiting in thickness, can keep repeating, can add nanosized clusters between layers (e.g. metals etc)
 - Proof that it works: water contact angle (surface energy) remains the same, spectroscopy shows linear buildup, can do layers or segments that have different characteristics