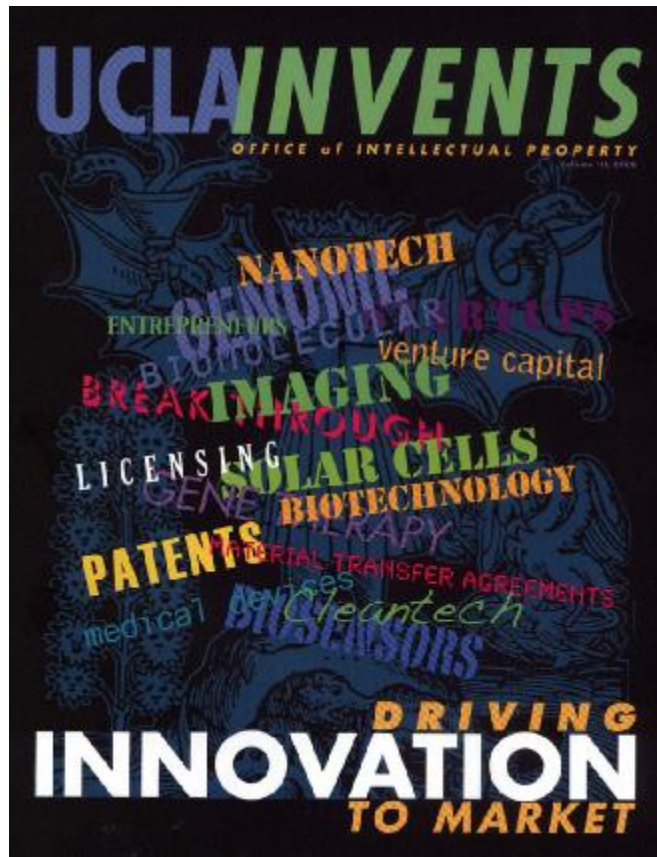


Photofunctionalization of titanium: A breakthrough technology after 45 years



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For the procedure to be successful, the titanium root must bond to the jawbone. The application of implants is often limited due to the poor bonding capacity of bone caused by various conditions, such as narrow or short jawbone, or aged, diabetic or porous bone. That's where the UCLA professor's discoveries come into play.

"We have two approaches," Ogawa says. "One involves photo-functionalization, which uses ultraviolet light activation to enhance the bone-bonding capacity of the implant. After the implant surface is treated with UV rays, the titanium attracts more bone-making cells and necessary proteins. That will make it bond faster and stronger."

The second discovery involves nano-structure, refining the bond even further on a near-molecular scale. Ogawa discovered the nanostructuring technology



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