In the early 1990's, Steven Tsai, a Stanford professor of labor, manufacturing composites is currently costly. To make his patented structures, Tsai uses pultrusion (a manufacturing process that involves pulling out of the material), a slot joining method for the grids' joints, and novel rib caps to reinforce the joints. As a result, his composite grid structures can be transported unassembled to minimize storage space, and they are assembled both quickly and easily in the field. The many advantages Tsai's composite structures possess make them promising for current and upcoming applications. His composite technology has already been incorporated into seven composite grid structures with multidirectional integrity, and they are assembled both quickly and easily in the field.

To learn more about Dr. Tsai's composite structures, please view http://www斯坦福.edu/technology/brainstorm/index.html.

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OptoBond™
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GPR prerequisites. In precision applications, their borders are water resistant, chemical resistant, and their mechanical strength high.

OptoBond is a hydroxide-catalyzed bonding method that joins ceramics, glass, and metal. The rapid heating and cooling, they are not affected by UV and heat degradation, while retaining their high optical throughput density (preventing the magnification of scratches per square centimeter using lasers with a wavelength of 1064 nanometers). Further, OptoBond has shown no observable reactivity with biological systems in all tests performed prior to your application. And it takes hold quickly but can be customized to provide periodical testing (for precise alignment of the GPR components).

Not only does OptoBond bond silicon-derived materials, it also unites semiconductors, metals, ceramics, and optical crystals, among others. After discovering OptoBond’s promising qualities and broad applicability, Gwo came to Stanford’s Office of Technology Licensing (OTL). In his review of the invention, Senior Associate Jon Sandelin also perceived OptoBond’s significant commercial potential. Together Gwo and Sandelin commenced their search for companies who would benefit from using the technology.

With OptoBond’s ability to bond so many and its disparate types of materials, Stanford has filed and is presently processing a patent application on OptoBond that contains over 100 claims. Gwo’s research shows that these remarkable, inorganic bonding materials may be tailored in terms of their reactivity in the environments in which it has been demonstrated. Further, OptoBond has shown no observable reactivity with biological systems in all tests performed prior to your application. And it takes hold quickly but can be customized to provide periodical testing (for precise alignment of the GPR components).

OptoBond bands:
Metals and alloys (and metal oxides thereof)
- Aluminum, brass, copper, iron, nickel, titanium, stainless steel, steel, lead, aluminum, titanium, tungsten, and zirconium.

Plastics and polymers:
- Acrylamides, butadiene, styrene, polyethylene, polypropylene, Lucite™, rubbers, polystyrene and polyethylene.

Crystals, including natural quartz and supplies:
- Germanium, siliex, germanium, indium, gallium, arsenic.
- Germanium, granites, and ceramics

optical transmissivity, thermal conductivity, and electrical conductivity.

A Sampling of Licenses Granted by OTL in the Last Quarter

OptoBond's Affinity for Industry

Together Gwo and Sandelin find those the precision optical systems market as the one they would initially pursue since this was one of Gwo's areas of interest. With OPTL's perspective licensees for the technology; Sandelin initiated the "Pioneer Program" to reward the early licensees of the invention. Under this non-exclusive licensing program, companies are able to use the innovative material and method for a $10,000 issue fee, a $70 per year use fee which covers earned royalties on the first $1M licensed product sales, and a 15.5% earned royalty on sales over $1M in any given year. The "Ready-to-Sign" agreements can be found online at http://all.otl.stanford.edu/industry/afm/AFM/AFM4.html.

Terms are subject to negotiation agreements. While the financial terms are lean to encourage extensive licensing of OptoBond, these financial terms are guaranteed only for licenses executed before March 31, 2001.

OptoBond has been warmly received by the optical systems market. Thus far, three companies have completed their licensees to OptoBond and are now using it for bonding in electrotechnics, optical and laser crystals, and general glass applications, such as manufacturing optical systems to optical glasses. On several occasions with other companies to pursue use of OptoBond for their applications. In addition, the founders of the company, Professor Robert L. Byer - a well-known Stanford University professor of physics who has demonstrated solid polishing simple materials (http://www battlegroundmaterials.com) to aid in your investigations for information from OTL. Please visit http://otl.stanford.edu/search.html to aid in your investigations for information from OTL.

For further information from OTL last OptoBond, please contact Kirsten Leute at kirsten.leute@stanford.edu or (650) 725-9407.

The look and the content of the site have also changed. Search capabilities are now available for the site (http://otl.stanford.edu/search.html) to aid in your investigations for information from OTL. Please browse and return any comments on the site to Jody Sumral at jody.sumral@stanford.edu.

OTL stands for the Office of Technology Licensing, which licenses its web site address. The new address is: http://otl.stanford.edu.

Working with Artifact Design, a Palo Alto design firm, Stanford's Office of Technology Licensing (OTL) recently adopted a new member of the OTL team. TONI (Transfer Of New Ideas) is the office's new mascot.

New URL for the New Year!

Please note that Stanford’s Office of Technology Licensing has changed its web site address: The new address is: http://otl.stanford.edu.

OTL 1998-1999 Fiscal Year Numbers

Total income: $40.082M
DVA: $23.089M
Non-DVA: $16.994M

Distribution to other institutions: $12.383M

Department distribution: $7.405M

School distribution: $7.185M

Inventor (Individuals) distribution: $6.446M

Number of docket's producing income: 339

Patent expenses: $2.674M

Total licenses: 147 (all non-DNA)

Income from new licenses: $3.716M

Companies Stanford took equity in: 17

The Stanford Technology Brainstorm is published quarterly to inform about opportunities to license OTL and the general structure of the site have also changed.