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Photonics TechnologyWorld
December 2001 Edition

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Recordable CDs Are Source of Gold Substrates

Hua-Zhong Yu isn't burning mixes of MP3s from **Napster** with his stacks of recordable CDs. An assistant professor in the department of chemistry at **Simon Fraser University** in Burnaby, British Columbia, Canada, Yu is investigating recordable CDs as a source of gold substrates for the fabrication of self-assembled monolayers.

Typically, researchers produce the monolayers with substrates that require cleaning in a dangerous bath of H_2SO_4 and H_2O_2. In a report of his work in the Oct. 1 issue of *Analytical Chemistry*, Yu described how a three- to five-minute surface treatment with nitric acid exposes the 50-nm-thick gold reflective layer in a disc.

Examinations with static contact angle and surface tension analysis, cyclic voltammetry and scanning tunneling microscopy revealed no significant difference between commercially available substrates and those produced from the CD reflective layers. Using Fourier transform infrared spectroscopy, Yu also found no significant differences in the monolayers of long-chain alkanethiols that formed on both substrates.

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