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ARTICLE #1 FOR IMMEDIATE RELEASE

Spinning a new role for CDs and CD players

Analytical Chemistry

CD-ROMs and DVDs and the hardware used to play these popular audio and video compact discs (CDs) have "enormous" potential as a new generation of portable, inexpensive instruments for home health monitoring and laboratory-based testing, scientists in Spain are reporting in the Oct. 15 issue of ACS' Analytical Chemistry, a semi-monthly journal. CD technology could be adapted for tests ranging from the measurement of environmental toxins to at-home disease diagnosis, their report said.

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In the study, Angel Maquieira and colleagues demonstrated technology that uses ordinary CDs and CD players as analytical tools with the potential for performing a range of key laboratory tests. As proof of principle, they developed a CD with a surface coating of so-called immunoassay materials and used it to identify three pesticides — 2,4,5-TP, chlorpyrifos, and metolachlor — placed on the disc. Upon spinning in a CD player with its standard laser light, the compounds caused

changes in light intensity. A computer interpreted those changes and correctly named the compounds.

"The obtained results show the enormous prospective of compact discs in combination with CD players for multiresidue and drug discovery applications," the article states. The researchers are currently working on ways to increase the sensitivity and versatility of the new technique.

ARTICLE #1 FOR IMMEDIATE RELEASE

"Microimmunoanalysis on Standard Compact Discs To Determine Low Abundant Compounds"

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ARTICLE #2 FOR IMMEDIATE RELEASE

Toward pure white light: Next-generation LEDs show bright promise

The Journal of Physical Chemistry (C)

Scientists in India are reporting an advance toward discovering a Holy Grail of the illumination industry — a white LED, a light-emitting diode that produces pure white light suitable for interior lighting of homes, offices and other buildings. Their study is in the Sept. 9 issue of ACS' The Journal of Physical Chemistry C, a weekly publication.

In the report, D. D. Sarma and Angshuman Nag point out that practical versions of these so-called white LEDs would be brighter, longer-lasting and more energy efficient than conventional light sources such as incandescent and fluorescent lamps and could replace them in the future. However, scientists have faced several difficulties in developing pure white LEDs with all the requirements and desirable properties. Existing versions produce tinted, unstable shades of white light that mar their performance.

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