

Small world

Artist and scientist pass the bucky

If you've ever wanted to mingle with a monster molecule, a new project that merges art and nanoscience could be your chance. The creators of *Zero@Wavefunction* don't even mind if you body-slam the buckyball, but they do hope you walk away with a little more understanding of the nanoworld.

The interactive installation, created by two professors at the University of California, Los Angeles, is based on the way researchers manipulate individual molecules – projected on a decidedly macro scale. When people pass the giant buckyball on a wall, they cast a shadow over it. A video camera feeds the image of the shadow coming in contact with the buckyball to a computer, which projects a new image of a molecule “moving” in response.

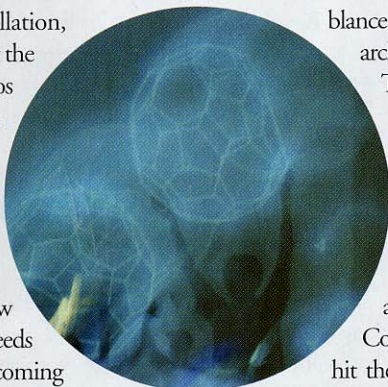
“It's really fun and gets people dancing around. ... It behaves in a strange way based on how things behave on the nanoscale,” said James Gimzewski, a UCLA chemistry professor and scientist with the California NanoSystems Institute. His collaborator is Victoria Vesna, chairwoman of the university's

design/media arts department. “It ... combines media art and nanoscience to create a third culture beyond traditional art-science boundaries,” he said.

It's no accident they chose the buckyball, or buckminsterfullerene, the spherical cage of 60 carbon atoms named for its resemblance to the geodesic domes of architect Buckminster Fuller. That, too, shows the melding of art and science.

They have staged the installation several times in the United States and Australia since last August, and in February it adorned the wall of UCLA's Court of Sciences. But it will hit the big time, so to speak, in November, when it becomes a key part of “Future Echoes,” a yearlong exhibit at the Los Angeles County Museum of Art. The project, which seeks to create metaphors on molecular-scale research, is expected to draw more than 100,000 people either physically or through a planned Web site.

“This is going to bring nanotech to everyone – not just males that are over 40 and read *Discover* and *Scientific American*,” he said.



Photos by Pete Conolly

UCLA professors created buckyball projections that are manipulated with shadows to bring nanotechnology closer to the human scale.

“(It's) all interactive, and no boring stories about ‘how big is nano?’ Even I can't comprehend the scale, anyway.”

Gimzewski and Vesna hope their joint projects also prompt philosophical questions about the impact of the emerging field on the culture at large. *ZeroWave's* Web site is <http://notime.arts.ucla.edu/zerowave/>. ●

– Jeff Karoub