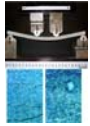


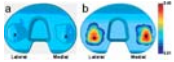
## Appendix VI.

### Photo Information and Credits



Page 6 – These images show the unique properties of Engineered Cementitious Composites in both its high ductility and ability to self-heal after fracture.

*Credit: Victor Li, University of Michigan*



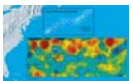
Page 8 – Comparison of experimental (a) and simulated (b) wear regions for a total knee replacement design after 5 million cycles of walking performed in a knee simulator machine. X's indicate locations of maximum wear. Dotted lines in (a) indicate boundaries of experimental wear regions. Color bar in (b) indicates depth in millimeters of simulated wear regions.

*Credit: B.J. Fregly, University of Florida*



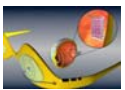
Page 9 – Damage from an EF1 tornado. CASA graduate student Patrick Marsh (University of Oklahoma) conducted a damage survey to verify the EF1 tornado identified in CASA data.

*Credit: CASA*



Page 10 – Data from satellite altimeters (lower inset), which measure sea surface heights, show depressions (blue) and bumps (red) that mark cold- and warm-water eddies in the ocean on June 17, 2005. Researchers tracked the southwestward motion of eddy A4 (light-blue in the upper inset) by ship from June 24 to Sept. 12. They released several drifters and a buoy (colored tracks) to capture the swirling motion of the eddy's currents.

*Credit: This figure was drafted by Jim Canavan and provided as a courtesy by Dennis McGillicuddy, WHOI, and the Colorado Center for Astrodynamic Research.*



Page 11 – The retinal prosthesis consists of a camera and transmitter mounted in eyeglasses, an implanted receiver, and a microelectrode array attached to the retina.

*Credit: Biomimetic MicroElectronic Systems Engineering Research Center (BMES)*



Page 13 – Astronomers have discovered a solar system analogous to ours containing scaled-down versions of Saturn and Jupiter. The two planets were revealed when the star they orbit crossed in front of a more distant star as seen from Earth. For a two-week period from late March through April 2006, the nearer star magnified the light shining from the farther star. Their finding suggests that our galaxy hosts many star systems like our own.

*Credit: Korea Astronomy and Space Science Institute (KASI), Chungbuk National University (CBNU), and Astrophysical Research Center for the Structure and Evolution of the Cosmos (ARCSEC)*



Page 14 – BirdSleuth students are citizen scientists, collecting data on birds and sharing their observations through the Cornell Lab of Ornithology.  
*Credit: Diane Tessaglia-Hymes, Cornell Lab of Ornithology*



Page 15 – View of the Flight Simulator Environment setup at Tuskegee University  
*Credit: Tuskegee University*



Page 16 – Two SEEDBED high school students use micropipettes to move enzyme digested DNA into an electrophoresis gel.  
*Credit: Cindy Barton, Tulsa Community College*



Page 17– Virtual wolves on the prowl.  
*Credit: Grant Spickelmier, Minnesota Zoo*



Page 18 – Middle school teachers building models of fullerenes (above) and running an experiment.  
*Credit: Andrew Greenberg, University of Wisconsin, Madison*



Page 20 – Middle school teachers building models of fullerenes (above) and running an experiment  
*Credit: Sandra Sheppard*



Page 22 – Propagation of the Gemini laser guide star during commissioning in July 2006. Exposure duration is approximately one minute.  
*Credit: Gemini Observatory*



Page 24 – Artist's rendering of what the environment around HD 23514 might look like as two Earth-sized bodies collide.  
*Credit: Gemini Observatory/Lynette Cook*



Page 25– Student practice combing for ectoparasites.  
*Credit: Dr. Scott Gardner, University of Nebraska*



Page 26 - Chemistry Comes Alive! website received the 2006 Pirelli *International Award* "for the effectiveness of this collection of multimedia tools that are designed to enhance chemistry education in schools and universities".  
*Credit: Journal of Chemical Education Software, a publication of the Division of Chemical Education, Inc. of the American Chemical Society*



Page 27 - A woman entrepreneur in the Philippines.  
*Credit: Dean Karlan and Innovations for Poverty Action*



Page 28 – This image shows the McMurdo Dry Valleys, a major research focus for the U.S. Antarctic Program. The region host the largest ice free areas of Antarctica.  
*Credit: Landsat Image Mosaic of Antarctica (LIMA) Project*



Page 29 - An image from the Saturday outreach program to K-8 schoolchildren by the NIRT PIs in Bullock County, Alabama.

*Credit: Tamara Floyd, Tuskegee University*



Page 29 - The Poker Flat Incoherent Scatter Radar. Insets show radar backscatter from Polar Mesospheric Summer Echoes between 80 and 90 km altitude. The middle row focuses in on a region of interest. In the bottom, 25 beams (black lines) have been used to create the first three-dimensional images of these structures in the middle atmosphere.

*Credit: Reproduced by permission of American Geophysical Union*