Goldstein named to panel that's foiling the fakes
9/28/05

Dr Alan H Goldstein, who holds the Fierer Chair in Biomaterials Engineering at Alfred University, has been appointed to the National Research Council study on Technologies to Deter Currency Counterfeiting. In other words, he'll be part of a team charged with foiling fake currency.The team is being asked to identify and evaluate significant emerging counterfeiting threats against Federal Reserve Notes (FRNs, more commonly known as dollar bills), and technologically feasible features that will deter counterfeiting for potential use in future changes in design. The objective of the study is to analyze and evaluate the factors that will allow the Bureau of Engraving and Printing to recommend designs that will optimally enhance the security of notes in view of these and other potentially emerging counterfeiting threats.Why a biomaterials specialist?"The National Research Council wanted to 'cover the waterfront' of emerging technologies," said Goldstein, who is founding director of the Biomedical Materials Engineering Science program in AU's School of Engineering. He said biomaterials offer a feasible means of foiling the fakes. "There are some very cool and unusual opportunities available with biomaterials."He explained the study "will identify technologies, both existing and emerging, that pose the most significant counterfeiting threats to Federal Reserve notes. Threats known today include digital methods of producing images posed by desktop scanners, digital cameras, color printers, digital imaging software, and digital pre-press and printing equipment. The study group will further identify features, materials, and technologies to deter counterfeiting of FRNs, and assess their relative effectiveness including the identification and evaluation of technologies that may deter the counterfeiting of FRNs and that could be incorporated into U.S. banknotes in the longer term (more than 5 years)."The U.S. dollar is still the global currency but that role is under increasing pressure, especially from the Euro." said Goldstein. "We tend to assume that the world is moving towards electronic commerce so that paper currency won't be necessary. But, in fact, the future of the paper money can't be predicted." Unless and until currency becomes obsolete, securing the dollar against counterfeiting technologies remains a phenomenal intellectual challenge, according to Goldstein. "Try to imagine a high-technology solution that can be used by anybody, anytime, and anywhere," Goldstein continued "that's the challenge we face today.'Goldstein went on to explain that while it's easy to put all kinds of hidden forensic security tags on currency, this is not the only feature needed at the point of sale. Hidden features include the magnetic strip or ink dyes that emit light when exposed to special infrared or ultraviolet lamps. But that doesn't always help the person who actually handles money unless he or she has a device that reads each hidden feature."People are extremely sensitive about the government putting anything into currency that could allow it to be electronically tracked or traced", Goldstein continued. "So we need something completely physical, a feature so simple that we can easily see it or touch it, but at the same time is complex enough to foil counterfeiters."Goldstein thinks that the answer lies in nanofabricated materials that will become cheaper and more available as industrial applications grow. "Here's a puzzle that anyone can try to solve," he said. "The U.S. Bureau of Engraving and Printing offers to give you a space about the size of a postage stamp on the new hundred dollar bill. What would you put there that could be easily and rapidly verified by anyone, anywhere... yet can't be counterfeited or simulated?"By helping the United States government answer the question, Goldstein is helping to insure that the 'greenback' remains the world's currency for years to come.For more information see current projects at http://www4.nationalacade...