

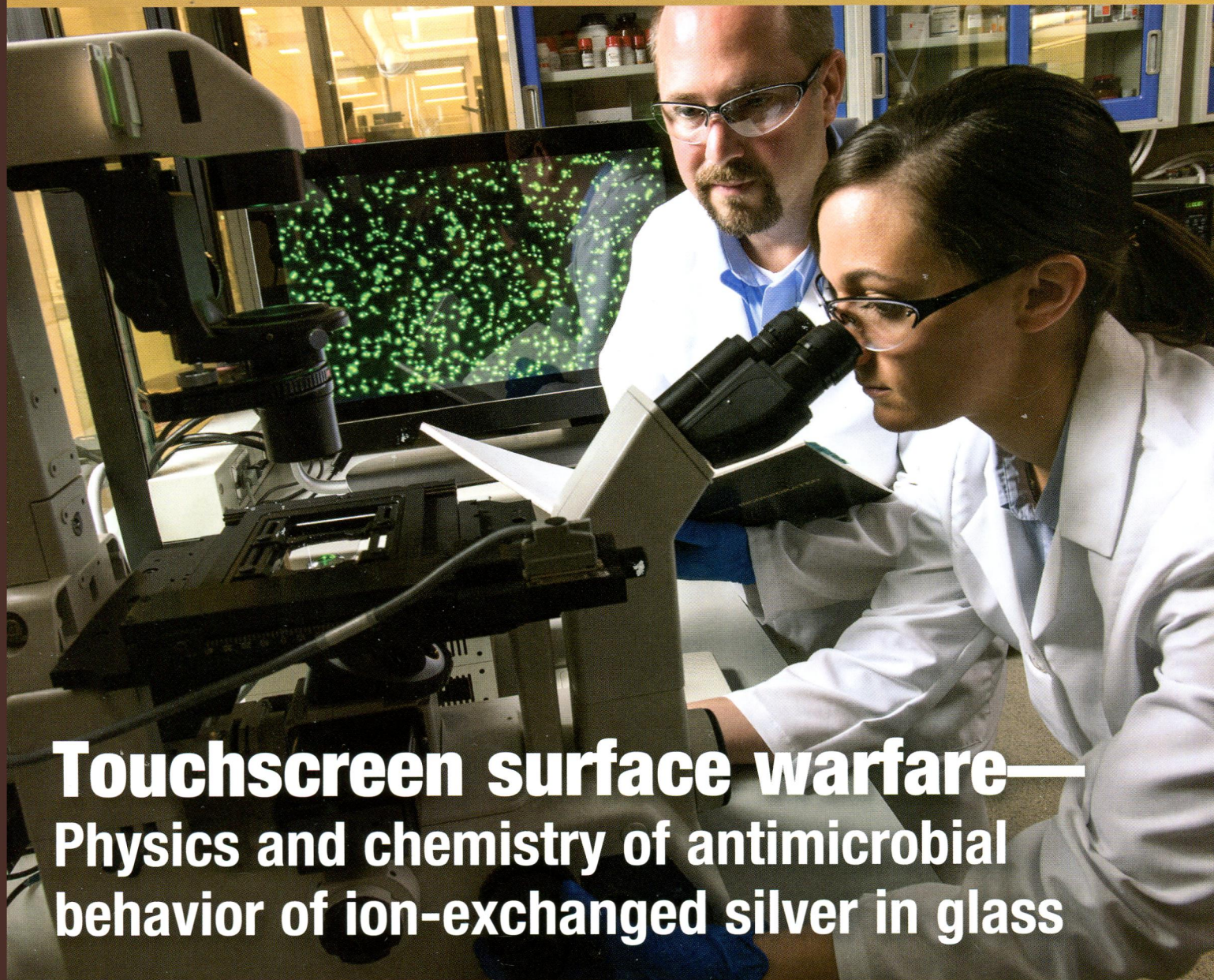
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# bulletin

emerging ceramics & glass technology

MAY 2014



## Touchscreen surface warfare— Physics and chemistry of antimicrobial behavior of ion-exchanged silver in glass

- TiO<sub>2</sub> photocatalyst air purification •
- America Invents Act and impact on IP •
- Stress strengthening of glass fibers •



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C. Kosik Williams, N.F. Borrelli, W. Senaratne, Y. Wei, and O. Petzold

*Glass composition, silver concentration, and ambient conditions control antimicrobial efficacy on ion-exchanged glass surfaces and could reduce bacteria population on glass touchscreens.*

### Passive purification—Effectiveness of photocatalytic titanium dioxide to convert pathogens and pollutants . . . . . 25

Karen Welch

*Titanium dioxide has the potential to clean and disinfect under the right lighting conditions and environment.*

### Reengineering US patent law with the America Invents Act . . . . . 31

Steve Ritchey

*The second article in a two-part series reviews patent law changes that began in 2011 with the signing of the America Invents Act and suggests best practices for complying with the law.*

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*A new method for strengthening silica fibers is independent of thickness and composition.*

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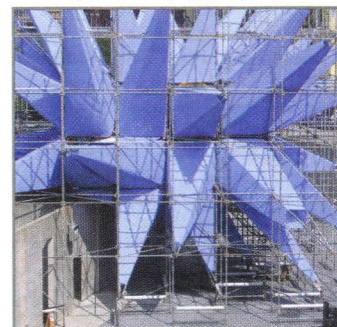


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Touchscreen surface warfare—Physics and chemistry of antimicrobial behavior of ion-exchanged silver in glass

(Credit: Corning Inc.)

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## feature article

Passive purification—Effectiveness of photocatalytic titanium dioxide to convert pathogens and pollutants

(Credit: Wikimedia Commons)

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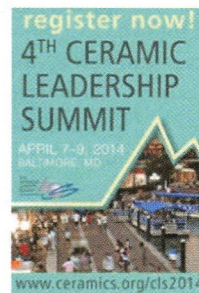


March 18, 2014

From the editors of *The American Ceramic Society Bulletin*.

### Budget update: NSF presents 2015 request, unveils strategic plan

The NSF's mission is to transform science and engineering, stimulate innovation, and address societal needs. Meeting those goals will cost about \$7.3 billion, according to a new budget request. What will Congress have to say? [\[More\]](#)



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### A recipe to manufacture success in manufacturing

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<http://bit.ly/acersrecipe>



### Thank your microbiome—Gut microbes are behind chocolate's health benefits

New research is helping to solidify dark chocolate's spot with the good guys.  
<http://bit.ly/acerschocolate>

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