**Global Challenges/Chemistry Solutions
Our Sustainable Future: First mobile app green chemistry fosters sustainable manufacturing of medicines**

Combating disease . . .  promoting public health … providing clean water and safe food . . . developing new sources of energy . . . confronting climate change. Hello, from the American Chemical Society — the ACS. Our more than 163,000 members make up the world’s largest scientific society. This is “Global Challenges/Chemistry Solutions: New Solutions 2013.” Global Challenges 2013 updates the ACS’ award-winning podcast series.

Mention mobile applications, or mobile apps, and people think of games, email, news, weather and other software for smart phones and tablets. But today’s episode describes the first mobile application to foster wider use of the environmentally friendly and sustainable principles of green chemistry. It is the topic of a report in ACS’ new journal, ACS Sustainable Chemistry & Engineering.

Sean Ekins, Ph.D., D.Sc., points out that the companies that manufacture medicines, electronics components and hundreds of other consumer products have a commitment to work in a sustainable fashion without damaging the environment.

Here’s Ekins, who is with Collaborations in Chemistry and is the lead author:

*“This is the heart of green chemistry, sometimes defined as using a set of principles that reduces or eliminates the use or generation of various hazardous substances in the design, manufacture and application of chemical products.”*

His team’s article describes a guide on doing so for solvents, key ingredients in processes for making medicines. Some traditional processes generate 25-100 times more waste than the chemical they are making, such as with pharmaceuticals.

*“The solvents guide was developed by the ACS Green Chemistry Institute’s Pharmaceutical Roundtable, which is a group of 14 pharmaceutical companies. We developed the Green Solvents mobile app version initially for Apple devices. This covers 60 different solvents and later on, we developed the Lab Solvents version for Android, which covers over 100 solvents. Both the Apple and Android versions of these mobile apps are free and available now.”*

 **Smart Chemists/Innovative Thinking**

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Today’s podcast was written by Michael Bernstein. I’m Katie Cottingham at the American Chemical Society in Washington.