Having to constantly re-charge one’s devices is tiresome and sometimes impossible. If you have ever misplaced your charger, you understand the sentiment. Leave it to Massachusetts to develop another break-through technology, this time in textiles innovation, that will help facilitate charging your devices. Scientists at UMass Amherst have developed a yarn coating that turns fabrics into circuits. Yarns treated with this polymer coating act as wires to transmit electricity. Previous yarn coating technologies had difficulty in maintaining their integrity through regular garment usage (i.e., stretching, human sweat, laundering) and added excess weight or made fabrics more rigid.

The new polymer coating used to create conductive fabrics is breathable, metal-free, resistant to stretching, wear, and laundering and preserves the fabric’s weight and hand feel. This means that in the future, power-generating garments will look and feel no different from those we wear today. The materials scientists’ goal is to turn any fabric, weave type, and garment into a conductor. The conducting textiles can be built into various applications, such as harvesting energy from body movement and converting it into electricity. Think about it - every time you move, your clothes generate power. The UMass scientists are also working toward turning any off-the-shelf garment into a solar cell to capture sunlight shining on your clothes and store the energy in a battery or use it to power a small device. The day when we can do without our chargers and rely on our devices to charge themselves by simply wearing them is getting closer.
About the Author

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Sarah is a high performing project leader with deep retail and systems skills and over 20 years of experience delivering value and results.