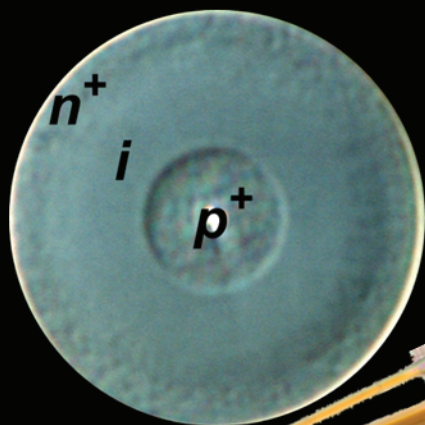


ADVANCED MATERIALS

Penn State MRSEC DMR-0820404: R He, TD Day, M Krishnamurthi, JR Sparks, PJA Sazio, V Gopalan, and JV Badding, Silicon *p-i-n* Junction Fibers, *Advanced Materials* **25**, 1460-1467, 2013.



Crystalline
Si pin
junction
fibers

John V. Badding and co-workers demonstrate on p. 1461 the ability to fabricate silicon p-i-n junctions within high aspect ratio optical fibers, and which exhibit photovoltaic response. These structures are flexible, even when removed from their silica glass templates, despite their crystalline nature. Junctions of up to one meter length have been fabricated, but also a Si wire with a length of over 10 meters has been made. This Si wire can be wound onto a spool and even woven into a fabric. With further development, these fibers can be useful for textiles and other woven fabric applications.



Flexible,
weavable
Si wire

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