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(54) WINDOWS WITH POWER GENERATION FROM TRANSPARENT SOLAR ENERGY HARVESTING DEVICES COMPRISING WAVELENGTH-SPECIFIC ABSORBERS

(71) Applicant: Andluca Technologies Inc., Princeton, NJ (US)

(72) Inventors: Nicholas C. Davy, Philadelphia, PA (US); Jason U. Wallace, Rochester, NY (US); Douglas H. Axtell, Rochester, NY (US)

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(57)ABSTRACT

Illustrative embodiments of the invention generally relate to photovoltaics and solar energy harvesting devices and, particularly, to those that are transparent or semi-transparent, allowing sufficient visible light through them to allow visualization of objects through them, and more particularly, to those that supplement their primary near ultraviolet light absorption with secondary and/or tertiary absorptions of narrow bands of visible light while maintaining their transparency. Various embodiments of the invention relate to single solar materials with both primary ultraviolet absorption and secondary, narrow-band visible absorption, while some embodiments of the invention utilize mixtures of one or more materials to realize a primary ultraviolet absorption of light with secondary, or even tertiary, narrow bands of visible light absorption. Means of manufacturing such photovoltaics and solar energy harvesting devices will also be disclosed as well as the applications and uses thereof.

