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Mulitlayered Nanostructured Broad Band Absorber TIMOTHY CORRIGAN, BENJAMIN IDE, Concord University — Wasted energy in the form of heat is perhaps the largest source of lost energy making many power systems inefficient. Systems designed to convert heat into useful energy need a method of collecting the heat. We previously described a multilayer design with successive thin metallic and dielectric (non-metal and transparent) layers, where each successive metallic layer absorbs a small fraction of the radiation. However, the regular thickness of the dielectric layer causes reflection peaks, or regions where no absorption occurs. In this work we describe a similar design where we eliminated the undesirable reflection peaks using varying thicknesses of the dielectric layer.

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