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**Visible to near infra red absorption in natural dye (Mondo Grass Berry) for Dye Sensitized Solar Cell**[1] DULEEPA PITIGALA, Department of Physics and Astronomy, Georgia State University, Atlanta, GA, L.A.A. DESILVA, Department of Physics, University of West Georgia, Carrollton GA, A.G.U. PERERA, Department of Physics and Astronomy, Georgia State University, Atlanta, GA — The development of dye sensitized solar cells (DSSC) is an exciting field in the low cost renewable energy production. Two major draw backs in the DSSCs are the narrow spectral response and the short term stability. Research on development of artificial dyes for broadening the response is important in finding a solution. Work presented here shows a broad spectral response with a natural dye extracted from a Mondo Grass berry (Ophiopogonjaponicus).The dye is extracted by crushing the berries and filtering to remove the pulp. A DSSC sensitized with Mondo Grass dye, and with TiO2 film screen printed on a Florien doped Tin Oxide (FTO) glass and baked for 30 minutes at 450 $^{\circ}$C as the working electrode and Iodine/triiodide red-ox electrolyte as the hole collector was tested for its performance. An open circuit photovoltage of 495 mV and a short circuit photocurrent of 0.6 mA/cm2 were observed under a simulated lamp equivalent to 1 sun illumination. The broad spectral response from 400 nm to 750 nm was also observed for the Mondo Grass dye compared to other natural dyes consists of anthocyanins or tannins.

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