

Learning from nature for engineering: How structural colours and other secrets of life around us can help change our technology towards sustainability

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There are beetles that are whiter than white. Butterflies with metallic scales that seem to shine even in low-light conditions. Beautiful jewel beetles, shiny golden, green or red. And, of course, the *Selaginella willdenowii* fern (see image), with its iridescent blue-green coloration. We encounter them on our trips to the rainforest here in Malaysia. They are of touching beauty. But there is more: they are also interesting for engineers!

Why?

All these colours have something in common: they are caused by tiny little structures, not by pigments. Ille, the physicist who came to Malaysia in 2009 to learn from our natural environment, will be sharing about her work, which comprises the transfer of deep principles of animated nature to science, technology and the arts, for a sustainable future for all.



The "peacock" fern Selaginella willdenowii, a common plant in the Malaysian rainforest, is one of the inspirational organisms for Prof. Ille's work at UKM. © Mr. Foozi Saad, IPGM, Malaysia. Image reproduced with permission.