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Influence of Coating Thickness of Polyimide for Moisture Sensing

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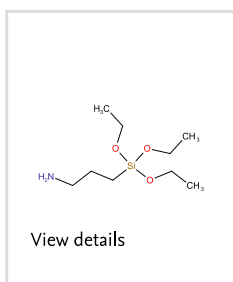
This work focused on the effect of existence of polyimide coated fibre Bragg grating (FBG) for moisture sensing in stingless bee. The moisture sensitive material namely polyimide (PI) was used to improve the sensitivity of the fibre optic sensor. By taking the benefits from amine groups in 3-(aminopropyl) triethoxysilane (APTES), PI is coated onto the segment of FBG through covalent interaction. Different thickness of PI coated FBG as well as determination and optimization of the designated sensor has been done. 3 layers of polyimide coating were used to improve the sensitivity of moisture sensing, and the sensitivity of coated fibre been analysed. © Published under licence by IOP Publishing Ltd.

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