

Fabrication of chitosan and calcium carbonate bio-crystals for humidity sensor prepared from annealed shrimp and egg shell

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Abstract. We reported the humidity sensor free catalyst prepared from shrimp and egg shell. The annealed shrimp and egg shell were ground to be powder and mixed together with various ratios. The samples were characterized and investigated by X-ray diffraction technique (XRD), Scanning electron microscope (SEM) and humidity sensing. Therefor, XRD pattern of shrimp and egg shell show chitosan and CaCO_3 structures, respectively. Their SEM images indicate massive agglomeration of morphology. Moreover, the humidity sensor demonstrates highest sensitivity of shrimp and egg shell ratio of 1:1 for 4.81 at 85%RH. However, the resistance and relative humidity relationship indicates non-linear.

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