

Biocomposites from Cassava pulp and Poly(lactic acid): Influence of PLA-g-GMA

Yupaporn Ruksakulpiwat^{a,b}, Thanh Chi Nguyen^{a,c}, Watcharin Ruangudomsakul^{a,b}, Chaiwat Ruksakulpiwat^{a,b}

^a School of Polymer Engineering, Institute of Engineering, Suranaree University of Technology, Thailand

^b Center of Excellence on Petrochemical and Materials Technology, Thailand

^c Faculty of Applied Sciences, Ton Duc Thang University, Ho Chi Minh City, Vietnam

Glycidyl methacrylate (GMA) was successfully grafted onto poly (lactic acid)(PLA) by melt mixing method in an internal mixer. After grafting GMA onto PLA chain, the brittle behaviour of PLA was changed to ductile behaviour of PLA-g-GMA. Significant higher elongation at break and impact strength of PLA-g-GMA was obtained compared to those of pure PLA. PLA-g-GMA was used as an effective compatibilizer for PLA/CNFs composites. The crystallization rate of PLA in PLA/PLA-g-GMA/CNFs composites was enhanced considerably compared to that of neat PLA and PLA/CNFs composites. Moreover, PLA/PLA-g-GMA/CNFs composites revealed the improved impact strength. Meanwhile, the tensile strength and elongation at break of composites were slightly improved with the addition of PLA-g-GMA.

Corresponding author e-mail: yupa@sut.ac.th

Author Biography: Assoc. Prof. Yupaporn Ruksakulpiwat received her Ph.D. in Polymer Engineering from Department of Polymer Engineering, The University of Akron in 1999. Her expertise is in microstructure and crystallization of polymer during polymer processing and biopolymer composites.

Name: Yupaporn Churdpant Ruksakulpiwat

University/Institute: Suranaree University of Technology, Thailand

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