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Title:	Effect of carbon nanotubes on mechanical, electrical and thermal properties of plasma-modified multi-walled carbon nanotubes/polyimide nanocomposites
Authors:	Thomas, Aleena Anna (/jspui/browse?type=author&value=Thomas%2C+Aleena+Anna)
Keywords:	Carbon nanotubes Polyimide nanocomposites Polyimide matrix. Ammonia gases
Issue Date:	2016
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Citation:	AIP Conference Proceedings, 1724(1),
Abstract:	A nanocomposite of polyimide based surface modified multiwall carbon nanotubes (MWCNTs) has been prepared. The surface modified MWCNTs were synthesized by exposing MWCNTs to radio frequency (RF) plasma discharge of oxygen, nitrogen and ammonia gases. Raman spectra studies evidences the inclusion of defects onto the surface of carbon nanotubes. A homogenous dispersion of plasma modified MWCNTs was achieved in polyimide matrix. Owing to the strong interfacial interaction between the polymer matrix and incorporated plasma modified MWCNTs the mechanical, electrical and thermal property of the polyimide was enhanced. These results indicate that the plasma surface modified MCNTs incorporated into the polyimide matrix acts as an effective reinforcement filler material in the polyimide matrix.
Description:	Only IISERM authors are available in the record.
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