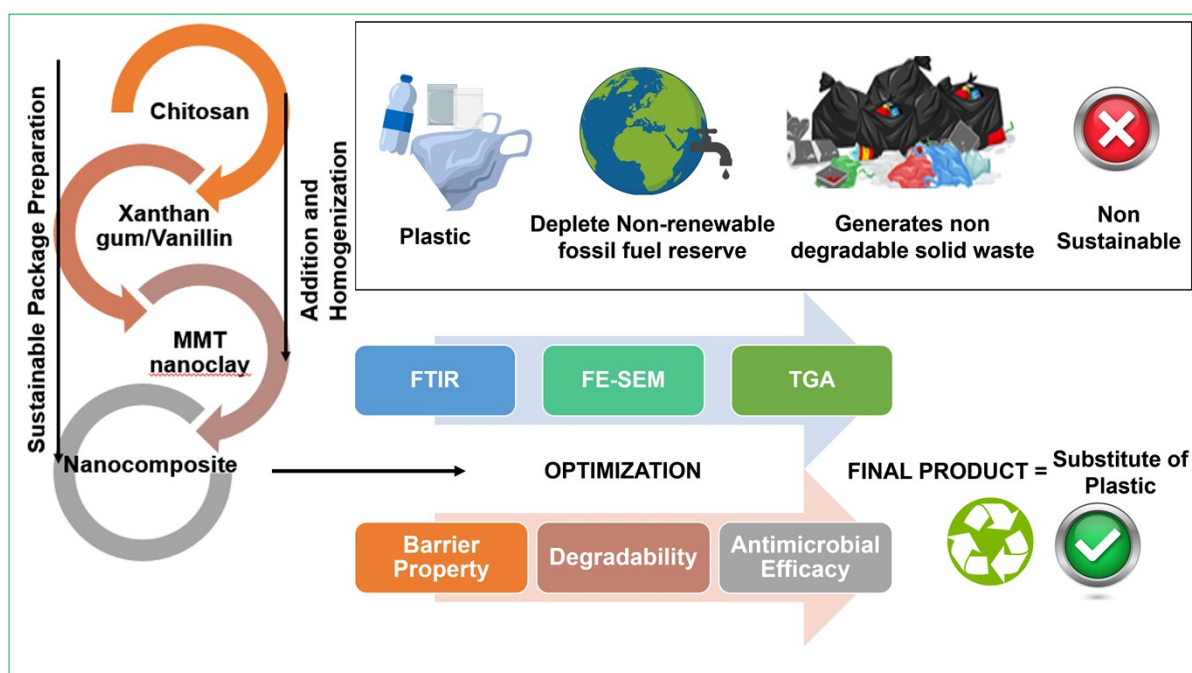


# Advancing Sustainability: A Novel Biopolymer-based Degradable Nanoclay Composite Film for Next-Generation Packaging

## Graphical Abstract



## Table of content

S. No.	Content	Page no.
	Abstract	1-2
	Keywords	2
	Graphical Abstract	2
1.	Introduction	2-3
2.	Experimental Section	
2.1	Materials	4
2.2	Methodology	4-
2.2.1	Fabrication of Packaging Films	4-5
2.2.2	Analytical Characterization	5-6
2.2.3	Barrier Property	6-7
2.2.4	Water Absorbency and Degradability	7
3.	Result and Discussion	
3.1	Analytical Characterization	

	Thickness measurement	9-10
	Transparency and Opacity	10-11
	FTIR analysis	11-12
	Mechanical parameter analysis	12-13
	Thermal analysis	13-14
	Surface Morphology analysis	14-16
3.2	Barrier Ability of Fabricated Packaging	
	Water Vapor Barrier	16-17
	Gas Barrier	17
	UV Barrier	17-18
3.3	Water Absorbency and Degradability	
	Water absorbance capacity	18-19
	Biodegradability	19-20
4.	Conclusion	22
	Author Contribution	22-23
	Conflicts of interest	23
	Data Availability	23
	Acknowledgements	23
	References	23-26