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Table of Abbreviations

APP	Ammonium Poly- Phosphate
CNT	Carbon Nano Tube
CDFA	Carbonyl Difatty Amides
CCD	Charge Coupled Device
CA	Charring Agent
CVC	Chemical Vapor Condensation
CVD	Chemical Vapor Deposition
CAPB	Cocamidopropyl Betaine
CAB	Cocamidopropylbetaine
DSC	Differential Scanning Calorimetry
DRS	Digital Range Sensor
DNR	Do Not Resuscitate
DLS	Dynamic Light Scattering
EDX	Energy Dispersive X-ray
ESO	Epoxidized Soybean Oil
EG	Exfoliated Graphite
EXAFS	Extended X-Ray Absorption Fine Structure
FA	Fatty Amides
FHA	Fatty Hydroxamic Acids
FNC	Fatty Nitrogen Compounds
FWHM	Full Width at Half Maximum
GPC	Gel Permeation Chromatography
HRR	Heat Release Rate
HRTEM	High Resolution Transmission Electron Microscopy
HTXRD	High-Temperature X-Ray Diffraction
HA	Hydroxyapatite
IR	Infrared
ISCD	International Society for Clinical Densitometry
LA	Lactic Acid
LDH	Layered Double Hydroxide
EPMgMA	Maleic Anhydride-Grafted Ethylene Propylene Rubber
MFC	Micro Fibrillated Cellulose
MW	Microwave
MMT	Montmorillonite Clay
NMR	Nuclear Magnetic Resonance
OMLS	Organically Modified Layered Silicate
OREC	Organically Modified Rectorite
OZrP	Organo-Modified Zirconium Phosphate
OMMT	Organo-Montmorillonite
POM	Petra/Osiris/Molinspiration
PBAT	Poly (Butylene Adipate-Co-Terephthalate)
PLA	Poly Lactic Acid
PLLA	Poly L-Lactic Acid
PDI	Polydispersity Index

pXRD	Powder X-Ray Diffraction
RPM	Revolutions Per Minute
SEM	Scanning Electron Microscopy
SiC	Silicon Carbide
SEC	Size Exclusion Chromatography
SZ	Sulfated Zirconia
SFM	Synthetic Fluorine Mica
TAC	Triallyl Cyanurate
THF	Tetrahydrofuran
TMS	Tetramethylsilane
TG	Thermogravimetry
TGA	Thermogravimetry Analysis
TPS	Thermoplastic Starch
TLC	Thin-Layer Chromatography
THR	Total Heat Release
TEM	Transmission Electron Microscopy
TMSCN	Trimethylsilyl Cyanide
TFC	Twice Functionalized Organoclay
UV	Ultraviolet
XRD	X-Ray Diffraction

General Remarks

[1] Melting points were determined on a Fargo melting point apparatus and are uncorrected.

[2] ^{1}H NMR & ^{13}C NMR spectra were recorded on 400 MHz, Bruker AVANCE II spectrometer. Making a solution of samples in DMSO-d_6 or $CDCl_3$ solvents using tetramethylsilane (TMS) as the internal standard and are given in the ppm (δ) scale. The standard abbreviations s, d, t, q, m, dd, brs refer to singlet, doublet, triplet, quartet, multiplet, doublet of doublet, and broad singlet respectively.

[3] Mass spectra were recorded on Shimadzu GC-MS-QP 2010 spectrometer operating at 70 eV using direct injection probe technique.

[4] IR spectra were recorded on an IR Affinity-1S spectrophotometer Shimadzu or Shimadzu FT-IR 8400 Spectrophotometer.

[5] Powder XRD measurements were performed on the Philips PANalytical by an X-ray diffractometer using Cu Kα radiation source (λ= 1.540598 Å) operated at 30 mA, 40 kW with step size 0.02 and scan time 0.5 sec.

[6] Thermo gravimetric analysis and Differential thermal analysis (TGA-DTA) was carried out on a Shimadzu DTG-60H at 10 °C min^{-1} heating rate in nitrogen atmosphere.

[7] Differential scanning calorimetric (DSC) measurements were carried out on a Shimadzu DSC60 at a heating rate of $10^{o}C\ min^{-1}$ under a nitrogen atmosphere (flow rate $20mLmin^{-1}$) using standard aluminium pans. Known amounts of the samples were sealed with the help of a crimper. The DSC thermograms were scanned over the temperature range from 50-400^{o}C.

[8] DLS analyses were carried out on Microtrac's DLS model Nanotrac.

[9] The instrument High resolution transition electron microscope (HRTEM) and Energy Dispersive X-ray (EDX) JEOL JEM 2100 model with OXFORD Instrument INCA X-SIGHT model attached detector.

[10] Scanning Electron Microscopy (SEM) and Energy Dispersive X-ray (EDX) were carried out on model JEOL-JSM-6510LV.

[11] The instrument for GPC analysis used was Perkin elmer 200 series Refractive Index Detector and the analytical column for GPC analysis used was PL gel 5

μm 'Mixed D' columns connected in series with a guard column, length 30 cm, ID 7.8 mm and particle size 10.0 μm.

[12] Analytical thin layer chromatography (TLC) was performed on Merck precoated Silica G60 F254 glass plates. Visualization of the spots on TLC plates was achieved either by exposure to iodine vapor or UV light.

[13] All evaporation of solvents was carried out under reduced pressure on QUITRON Roteva - Rotary Vacuum Evaporator.

[14] All reported yields are isolated yields after chromatography or crystallization or as mentioned.

[15] The chemicals used for the synthesis of intermediates were purchased from Aldrich, Merck, Spectrochem, Sisco Research Laboratories (SRL), Thomas Baker and SD Fine Chemicals.

[16] The structures and names of all compounds given in the experimental section and in physical data table were generated using ChemBio Draw Ultra 12.