



Key Engineering Materials

Volume I

Current State of the Art on Novel Materials

Editors

Devrim Balköse, PhD

Daniel Horak, PhD

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Devrim Balköse, PhD, Daniel Horak, PhD,
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A. K. Haghi, PhD, and Gennady E. Zaikov, DSc
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Volume I : Current State of the Art on
Novel Materials

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LIST OF ABBREVIATIONS

ACA	ϵ -Amino caproic acid
AIDS	Acquired immune deficiency syndrome
AI	Activity index
ATP	Adenosine triphosphate
AP	Ammonium perchlorate
APEP	Ammonium Perchlorate Experimental Plant
AFM	Atomic force microscopy
ASM	Atomic-power microscopy
ATR-FTIR	Attenuated total reflectance-Fourier transform infrared spectroscopy
BET	Brunauer–Emmet–Teller
BZONO	4-Benzoate-2,2,6,6-tetramethyl-1-piperidinyloxy
BSR	Butadiene-styrene rubber
BTTN	Butanetholtrinitrate
CNT	Carbon nanotubes
CMC	Cell membrane complex
CAB	Cellulose acetate butyrate
CVD	Chemical vapor deposition
CoSt2	Cobalt stearate
CVID	Common variable immune deficiency
CFD	Computational fluid dynamics
CuSt2	Copper stearate
RDX	Cyclotrimethylene-trinitramine
DD	Deacetylation degree
DNA	Deoxyribonucleic acid molecule
DBTL	Dibutyltindilaurate
DEGDN	Diethyleneglycol dinitrate
DSC	Differential scanning calorimetry
DTA	Differential thermal analysis
DOP	Dioctylphthalate
DFM	Dynamic force microscope
DMTA	Dynamic mechanical thermal analysis
EPR	Electron paramagnetic resonance
EBID	Electron-beam-induced deposition
EDS	Energy dispersive spectroscopy
EDX	Energy dispersive X-ray
EAA	Ethylene–acrylic acid
EDA	Ethylenediamine

EOE	Ethylene-octene elastomers
EPDM	Ethylene-propylene-diene elastomer
EVA	Ethylene-vinyl acetate
EXAFS	Extended X-ray absorption fine structure
FD	Formaldehyde
FdUR	5-Fluoro-2'deoxyuridine
FTIR	Fourier transform infrared spectroscopy
GDLs	Gas diffusion layers
GlcN	Glucose amine
HDPE	High density polyethylene
HIV	Human immunodeficiency virus
HCl	Hydrochloric acid
HBP	Hyperbranched polymers
IR	Infrared
IIR	Isobutylene-isoprene rubber
IPP	Isotactic polypropylene
KTGF	Kinetic theory granular flow model
LB	Langmuir-Blodgett multilayers
LB	Lattice Boltzmann model
LOI	Loss of ignition
LDPE	Low density polyethylene
LMC	Low-molecular compound
MgSt2	Magnesium stearate
MALDI-TOF	Matrix-assisted laser desorption/ionization time of flight
MW	Matt waste
MDF	Medium density fiberboard
MUF	Melamine urea-formaldehyde
MEF	Melamine-formaldehyde
MUPF	Melamine-urea-phenol-formaldehyde
MFI	Melt flow index
MHS	Metal hydroxide salts
MB	Methylene blue
MW	Molecular weight
NK	Natural killer
NEPE	Nitrate ester plasticized polyether
NG	Nitroglycerin
MNA	N-Methyl-p-nitroaniline
NBRs	Acrylonitrile-butadiene rubbers
NMR	Nuclear magnetic resonance
OSA	Objective-based simulated annealing
OPC	Ordinary Portland cement
OWRK	Owens-Wendt-Rabel-Kaelble method
pBQ	Para-benzoquinone
PF	Phenol-formaldehyde
PPMS	Physical property measurement system