

List of Abbreviations

AFM	Atomic Force Microscopy
ATRP	Atom Transfer Radical Polymerization
ARGET-ATRP	Activator Regenerated by Electron Transfer-ATRP
CRP	Controlled Radical Polymerization
DMF	N, N-Dimethylformamide
DSC	Differential Scanning Calorimetry
FT-IR	Fourier Transform Infrared Spectroscopy
GPC	Gel Permeation Chromatography
MCP	Methyl 2-Chloropropionate
MMA	Methyl methacrylate
PEG	Poly(ethylene glycol)
THF	Tetrahydrofuran
MEK	Methylethyl ketone
DCM	Dichloromethane
HMBC	Heteronuclear multiple-bond correlation
HSQC	Heteronuclear single-quantum coherence
KOH	Potassium hydroxide
MMA	Methyl Methacrylate
MWD	Molecular Weight Distribution
NMP	Nitroxide Mediated Polymerization
NMR	Nuclear Magnetic Resonance
PDI	Polydispersity Index
PMMA	Poly(Methyl Methacrylate)
PMDETA	N,N,N',N',N''-pentamethyldiethylenetriamine
Starch-g-PMMA	Starch-g-Poly(Methyl Methacrylate)
PEG-g-PMMA	Poly(Ethylene Glycol)-g-Poly(MethylMethacrylate)
SEM	Scanning Electron Microscopy
TGA	Thermogravimetric Analysis
TOCSY	Total correlation spectroscopy

List of Symbols

Wt. %	Weight percentage
Mol %	Mole percentage g.mol ⁻¹ Gram per mole
Conv %	Percentage of conversion
E _{act}	Activation energy
M _n	Number average molecular weight
M _w	Weight average molecular weight
M _w /M _n	Polydispersity index
k _{app}	Apparent rate constant
T _g	Glass transition temperature