

**MAGNETOPHORESIS OF POLY(SODIUM 4-
STYRENESULFONATE)/Fe₃O₄ CLUSTERS: THE
INFLUENCE OF COLLOIDAL STABILITY**

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CLUSTERS: THE INFLUENCE OF COLLOIDAL STABILITY**

by

YEAP SWEE PIN

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LIST OF ABBREVIATIONS

Ace	Acetic acid
ATR-FTIR	Attenuated total reflectance-Fourier transformed infrared spectroscopy
B&W	Black and white
BET	Brunauer-Emmett-Teller
BSA	Albumin from bovine serum
c.c.c	Critical coagulation concentration
CMC	Carboxymethyl cellulose
DCB	Divalent cation bridging
DLCA	Diffusion-limited colloid aggregation
DLS	Dynamic light scattering
DLVO	Derjaguin-Landau-Verwey-Overbeek
DOMs	Dissolved organic matters
EPM	Electrophoretic mobility
EQA	Environmental Quality Act
FWHM	Full width at half maximum
Gly	Glycine
HA	Humic acid
HGMS	High gradient magnetic separation
IEP	Isoelectric point
LDV	Laser doppler velocimetry

LGMS	Low gradient magnetic separation
MNPs	Magnetic nanoparticles
N	North
NaAlg	Sodium alginate
PAA	Poly(acrylic acid)
PAM	Polyacrylamide
PAP	Polyaspartate
PDI	Polydispersity index
PSS	Poly(sodium 4-styrenesulfonate)
QCM-D	Quartz crystal microbalance with dissipation
RLCA	Reaction-limited colloid aggregation
RNIP	Reactive nanoscale iron particles
S	South
SMCL	Secondary Maximum Contaminant Level
TEM	Transmission electron microscopy
TGA	Thermogravimetric analysis
U.S. EPA	Environmental Protection Agency United States
VSM	Vibrating sample magnetometer
XRD	X-ray diffraction