

## List of Abbreviations

MNPs	Magnetic nanoparticles
NPs	Nanoparticles
CAs	Contrast agents
Fe <sub>3</sub> O <sub>4</sub>	Iron Oxide
MRI	Magnetic resonance imaging
SBM	Solomon-Bloembergen-Morgan
USIONs	Ultra-Small Iron Oxide NPs
CTAB	Cetyltrimethylammonium bromide
SDS	Sodium dodecyl sulfate
Fe <sub>3</sub> O <sub>4</sub> @L-Arg@P	Pluronic <sup>®</sup> F127 Coated Iron Oxide
Fe <sub>3</sub> O <sub>4</sub> @L-Arg@P/bg	Brigatinib Loaded Pluronic <sup>®</sup> F127 Coated Iron Oxide
COP-MCRs	One-pot multicomponent reactions
PEO-PPO	poly(ethylene oxide) (PEO) and poly(propylene oxide) (PPO)
CMC	Critical Micelle Concentration
MCRs	Multicomponent reactions
KMS	Knoevenagel–Michael sequence
EtOAc	Ethylacetate
AA	Amino Acid
L-Arg	L-Arginine
L-Hist	L-Histidine
RBF	Round bottom flask
XRD	X-ray Diffractometer
FWHM	Full Width at Half Maximum
TEM	Transmission Electron Microscopy
HRTEM	High Resolution Transmission Electron Microscopy
SAED	Selected Area Electron Diffraction
SEM	Scanning Electron Microscope
HRSEM	High Resolution Scanning Electron Microscope
BET	Brunauer–Emmett–Teller
EDAX	Energy-dispersive X-ray Analysis
VSM	Vibrating-sample magnetometer
DCM	Dichloromethane

Conc.	Concentration
Oh	Octahedral
Td	Tetrahedral
FTIR	Fourier Transform Infrared
NMR	Nuclear Magnetic Resonance
UV-Vis	Ultraviolet-Visible Spectroscopy
HR-MS	High resolution Mass Spectroscopy
TLC	Thin-layer chromatography
TGA	Thermo Gravimetric Analysis
DSC	Differential Scanning Calorimetry
DFT	Density Functional theory
nm	Nanometer
h	Hour

\*Other abbreviations and symbols are explained in the text.