

NOMENCLATURE

A	a constant
a, c	lattice constants
AOT	Aerosol OT; Dioctyl sodium sulfosuccinate
B1g, Eg and A1g	Intensity and the ratio between different Raman vibrational modes in TiO ₂
d ₀₀₁	Basal spacing
E'	Storage modulus
E''	Loss modulus
E _B	Elongation at break
E _g	energy band gap (eV)
FTIR	Fourier transform infrared spectroscopy
fwhm	full width at half maximum
G'	Storage modulus
G''	Loss modulus
h	Water to titanium ratio
h	Planck's constant
hν	photon energy
ICDD	The international Centre for Diffraction Data
I _{sample}	integrated intensities of the photoluminescence emission spectra for the nanocrystal sample
I _{std}	integrated intensities of the photoluminescence emission spectra for the organic standard
J	Loss compliance
M _{HM}	Maximum torque at specified time of marching modulus curve
M _{HP}	Maximum torque at plateau curve
M _{HR}	Maximum torque at reversion curve
M _L	Minimum torque
OD _{sample}	optical densities of the nanocrystal sample
OD _{std}	optical densities of the organic standard
PL	Photoluminescence
QY _{sample}	the quantum yield for the nanocrystal sample
QY _{std}	the quantum yield for a known organic fluorophore

SDS	Sodium dodecyl sulfate
SEM	Scanning electron microscopy
Tan δ	Ratio of E'/E''
$t_{C(90)}$	Time to 90% of maximum torque
T_g	Glass transition temperature
t_{s2}	Time for 2 lbf in rise above ML used with 3° arc
ν	photon frequency (Hz)
w	mole ratio between water and surfactant
XRD	X-ray Diffraction
γ	interfacial tension
θ	angle
α	absorption coefficient