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 TiO2

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

h_v
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
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS</td>
<td>Sodium dodecyl sulfate</td>
</tr>
<tr>
<td>SEM</td>
<td>Scanning electron microscopy</td>
</tr>
<tr>
<td>Tan δ</td>
<td>Ratio of $E'/E''$</td>
</tr>
<tr>
<td>$t_{c(90)}$</td>
<td>Time to 90% of maximum torque</td>
</tr>
<tr>
<td>$T_g$</td>
<td>Glass transition temperature</td>
</tr>
<tr>
<td>$t_{s2}$</td>
<td>Time for 2 lbf in rise above ML used with $3^\circ$ arc</td>
</tr>
<tr>
<td>$v$</td>
<td>Photon frequency (Hz)</td>
</tr>
<tr>
<td>$w$</td>
<td>Mole ratio between water and surfactant</td>
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<tr>
<td>XRD</td>
<td>X-ray Diffraction</td>
</tr>
<tr>
<td>$\gamma$</td>
<td>Interfacial tension</td>
</tr>
<tr>
<td>$\theta$</td>
<td>Angle</td>
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<tr>
<td>$\alpha$</td>
<td>Absorption coefficient</td>
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</table>