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LIST OF SYMBOLS AND ABBREVIATIONS

A_α	-	Absorbance
α	-	Absorption coefficient
Å	-	Angstrom
P	-	Applied load
A	-	Area of the sample
α_1	-	Change in absorption
$\Delta\alpha$	-	Change in absorption coefficient
Δn	-	Change in index of refraction
Q	-	Charge
J	-	Current density in the material
ρ	-	Density of molecule
d	-	Diagonal length
ε_r	-	Dielectric constant,
DSC	-	Differential Scanning Calorimetry
DTA	-	Differential Thermal Analysis
θ	-	Diffraction angle
2Θ	-	Diffraction angle
χ_{eff}	-	Effective susceptibility
C11	-	Elastic stiffness constant
E	-	Electric field strength (V/m)
d	-	Electric flux density (C/m),
σ_e	-	Electrical conductivity
α_e	-	Electronic polarizability
Eg	-	Energy band gap

F	-	Force
FTIR	-	Fourier Transform Infrared
γ	-	Frequency of electromagnetic wave
β	-	Full width half maximum
ε_i	-	Imaginary dielectric constant
Z	-	Impedance
n	-	Index of refraction
I	-	Irradiance(power per unit area)
L	-	Length of the sample
α_0	-	Linear absorption
$\chi^{(1)}$	-	Linear or first order susceptibility
α_p	-	Linear polarisability
H	-	Magnetic field strength (A/m)
K	-	Material constant
μ	-	Molecular polarization
$\Delta\Phi$	-	On axis phase shift
C_p	-	Parallel plate capacitance
Io	-	Peak intensity
ε_0	-	Permittivity of free space
ε	-	Permittivity of the material
PL	-	Photoluminescence
E	-	Photon energy
H	-	Planck's constant
ε_{re}	-	Real dielectric constant
R	-	Resistance
τ	-	Response time
SEM	-	Scanning Electron Microscope
SHG	-	Second Harmonic Generation
$\chi^{(2)}$	-	Second order nonlinear optical susceptibilities

Cs	-	Specific heat capacity of solids (J/Kg.K)
C	-	Speed of electromagnetic wave
dn/dT	-	Temperature coefficient of therefractive index
TGA	-	ThemoGravimetric Analysis
k	-	Thermal conductivity (W/m K)
α_d	-	Thermal diffusivity of the sample
D	-	Thickness of the sample
$\chi^{(3)}$	-	Third order nonlinear optical susceptibilities
E_{gc}	-	Transition energy
T	-	Transmittance
UV/Vis	-	Ultraviolet Visible Spectroscopy
Hv	-	Vickers micro hardness
λ	-	Wavelength
XRD	-	X-Ray Diffraction
σ_y	-	Yield strength