

## ABBREVIATIONS

AQ	: Annealing quenching
$\mu\text{m}$	: micrometer
nm	: nanometer
BM	: ball mill
BPR	: ball to powder weight ratio
CW-OSL	: continuous wave optically stimulated luminescence
DRC	: dose response curve
DLS	: dynamic Light Scattering
EDX	: energy dispersive X-ray spectroscopy
ESR	: electron spin resonance
ET	: elevated Temperature
FC	: fast Component
FTIR	: Fourier Transfer Infrared Spectroscopy
Gy	: gray
LM-OSL	: linear-modulation optically stimulated luminescence
MC	: medium Component
NSQ	: nano-synthetic quartz
OSL	: optically stimulated Luminescence
PDI	: poly dispersity index
PIC	: photoionization cross-section
POSL	: pulse Optically stimulated Luminescence
PL	: photoluminescence
RT	: room temperature
SEM	: scanning Electron Microscopy
SC	: slow Component
TL	: thermoluminescence
TSL	: thermally stimulated Luminescence
TEM	: transmission Electron Microscopy
w.r.t	: with respect to
XRD	: X-ray diffraction