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### **List of Abbreviations**

|      |   |
|------|---|
| AFE  | Anti-ferroelectricity                     |
| Å    | Angstrom                                  |
| BE   | Binding energy                            |
| °C   | Degree Celsius                            |
| EDS  | Energy dispersive spectroscopy            |
| FE   | Ferroelectricity                          |
| FWHM | Full width half maxima                    |
| Hrs  | Hours                                     |
| ICDD | International centre for diffraction data |
| kHz  | Kilohertz                                 |
| MHz  | Megahertz                                 |
| Min  | Minute(s)                                 |
| MPB  | Morphotropic phase boundary               |
| Nm   | Nano-meter                                |
| P    | Polarization                              |
| E    | Electric field                            |
| PT   | Lead titanate                             |
| PVA  | Polyvinyl alcohol                         |
| SEM  | Scanning electron microscope              |
| T    | Temperature                               |
| XPS  | X-ray photoelectron spectroscopy          |
| XRD  | X-ray diffraction                         |