Index

A
Acoustic, 32, 39, 43, 46, 50
Atomic force microscope (AFM), 23–27, 31, 32, 43, 48

B
Barium titanate (BaTiO₃), 2, 8, 10, 19, 23, 33, 34, 49, 50
Battery, 40, 41, 45, 47, 50

C
Capacitor, 27, 40–42, 45–47, 50
Carbon nanotubes (CNTs), 28, 32, 33
Cloth, 22, 30, 31
Coercive field, 10
Converse piezoelectric effect, 1, 5
Correlation length, 11
Curie point, 7, 8

D
Depolarisation field, 9, 10, 14–16, 37
Direct piezoelectric effect, 1, 3, 5
Domain, 7–12
Doping/dope, 13, 38, 39

E
Electrospinning/electrospun, 23, 35, 36

F
Fibre, 22, 23, 30, 31, 35, 36, 39
Flexible, 21, 27–30, 33, 34, 36, 41, 44, 45, 50

H
Hexamethylenetetramine (HMT), 6, 21, 22, 25, 27, 30–33
Hooke’s law, 4, 5
Hydrothermal, 20, 23, 34
Hysteresis, 6, 9, 10

I
Impedance, 29, 48, 49

K
Kapton, 25, 28, 30, 33, 38

L
Layer-by-layer, 38
Load, 4, 6, 29, 34–36, 40, 45, 46, 49

M
Madelung constants, 5

N
Nyquist, 48, 49

P
Perovskite, 8, 11, 12, 15, 23, 35
Photodetector, 1, 41
Piezoelectric constants, 5
Polydimethylsiloxane (PDMS), 23, 33, 35, 36
Poly(3,4-ethylenedioxythiophene)poly(styrenesulfonate) (PEDOT:PSS), 29, 39
Polymer polyvinylidene fluoride (PVDF), 33
Poly(methyl methacrylate) (PMMA), 25, 27–29, 38, 41, 44
Pyroelectricity, 3
PZT. See Lead zirconate titanate (PZT)

**R**
- Rectify, 40, 42
- Remnant polarisation, 10

**S**
- Schottky, 14, 15, 24, 26, 28, 29, 36–38, 48
- Screen, 15, 16, 24
- Seed layer, 21, 30

**T**
- Transmitter, 40–42, 45

**U**
- Ultraviolet (UV), 37, 38, 40

**Z**
- Zinc nitrate, 21, 22, 25, 27, 30–33, 36
- Zinc oxide (ZnO), 2, 19–33, 35–41, 43, 48, 50

Self-powered sensors, 38, 40
Sensor, 22, 38, 40–42, 44, 45
Stern layer, 15
Strain, 3, 5, 7, 9, 11, 24, 26–28, 30, 33, 35, 37, 43–45, 50
Stress, 1–5, 7, 11, 12, 43, 44