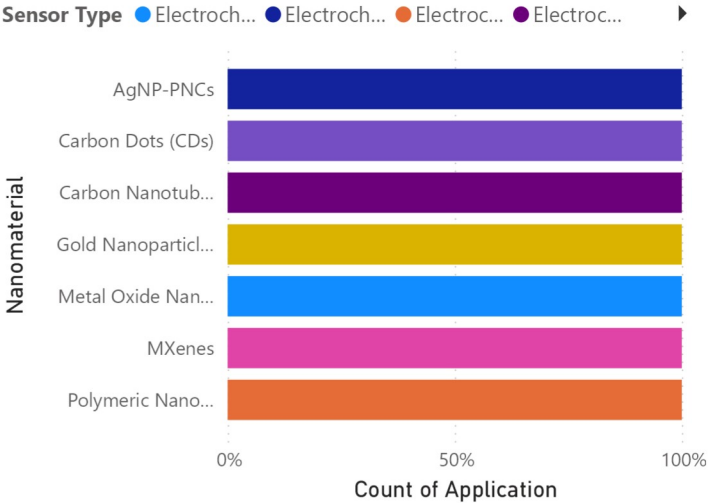


Count of Nanomaterial by Application



Count of Application by Nanomaterial and Sensor Type



Nanomaterial	Sensor Type	Limit of Detection	Sensitivity	Target Analyte
AgNP-PNCs	Electrochemical / Colorimetric	25 cells (for cancer cell detection)	High sensitivity via signal amplification	Cancer Cells, Dental disease markers
Carbon Dots (CDs)	Fluorescent	Nano- to picomolar range	High sensitivity	Pharmaceuticals
Carbon Nanotubes(CNTs)	Electrochemical / Optical	Very low, varies by analyte	High electrical conductivity for sensitive detection	Neurotransmitters, Neuropharmaceuti
Gold Nanoparticles(AuNPs)	Optical / Electrochemical	Sub-femtomolar	sensitivity Ultrasensitive detection via plasmonic effects	Antibiotics, Cancer biomarkers, Dopan
Metal Oxide Nanomaterials	Electrochemical	Very low (nM–pM range)	High catalytic activity and surface area	Dopamine, Norepinephrine, Folic acid
MXenes	Electrochemical / Photoelectrochemical / Optical	As low as 1×10 <sup>-14</sup> M (Pb <sup>2+</sup> )	High sensitivity, real-time monitoring	pharmaceuticals , Enviromental analyti
Polymeric Nanomaterials	Electrochemical / Molecular Imprinting	Very low (nM–pM range)	High sensitivity, selectivity, linearity	Chlorpromazine, Epinephrine, Cocaine