NanoWatch is a portable static light scattering (SLS) device designed to monitor nanoparticle pollution in air and water in real time. Built as a low-cost, field-deployable alternative to laboratory-based methods such as electron microscopy and dynamic light scattering (DLS), it enables continuous environmental analysis that traditional systems cannot achieve.

Using a 532 nm laser, photomultiplier tube (PMT), and Arduino-controlled stepper motor, the device performs multi-angle scattering analysis to determine particle size and intensity. Experimental trials confirmed **NanoWatch's** ability to detect nanoparticles in the 10–100 ppm range, with results closely matching theoretical predictions (98% accuracy). The system provides reliable, near-instantaneous readings, making it suitable for scalable environmental use.

At its core, **NanoWatch** demonstrates how accessible engineering can translate complexity into practicality for cleaner air and water, offering a step toward real-time pollution monitoring.