

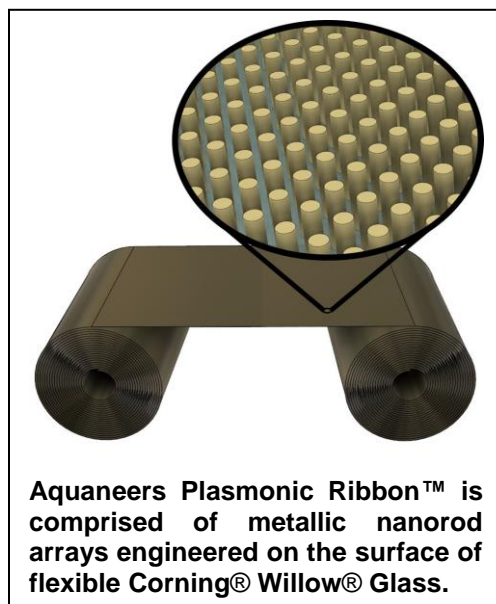


Plasmonic Ribbon™: Roll-to-Roll Fabricated Nanomaterial

Plasmonic nanomaterials offer the potential to transform the use of light in applications ranging from optical communications to photocatalytic chemical synthesis. Aquaneers Inc. innovations in continuous nanofabrication processes transitions high-performance nanomaterials from laboratory demonstrations to industrial scale manufacturing lines. This will enable high-value commercial applications dependent on steady access to reliably sourced plasmonic nanomaterials. Aquaneers Plasmonic Ribbon™ unites functional nanomaterials with economic methods for their large-scale manufacture to empower transformative technologies.

Aquaneers is seeking partners interested in obtaining plasmonic materials produced on high quality optical glass for utilization in commercial applications. The company thus far has identified marketable applications for Plasmonic Ribbon™ in solar energy conversion, catalysis, sensing, and metasurface photonics and is looking for customers active in these spaces. The value proposition is the low-cost, roll-to-roll fabrication processes used to reliably manufacture the Plasmonic Ribbon™ product, which further can be produced from a range of important nanomaterial constituents in customer configurable formats readily tailored to specific designs and application needs.

This functional platform technology exploits the optical energy transformation properties inherent to plasmonic nanorod arrays and is currently being utilized for photothermal solar energy conversion and the photocatalytic utilization of carbon dioxide under grant support by the US Dept. of Energy.



Aquaneers Plasmonic Ribbon™ is comprised of metallic nanorod arrays engineered on the surface of flexible Corning® Willow® Glass.

The proprietary continuous manufacturing methodologies being developed by Aquaneers to bring Plasmonic Ribbon™ to market require access to sophisticated specialty processing equipment and unique materials that comes about through the company's strong collaborative relationships. Advanced nanomanufacturing R&D is being performed with flexible Corning® Willow® Glass product supplied by Corning® as the substrate material for nanofabrication; Binghamton University, where novel apparatus for roll-to-roll process development and implementation can be accessed, Brookhaven National Laboratory, where specialized research facilities are made available, and New York University, whom provides use of state-of-the-art analytical equipment and is a source of top recruiting talent needed for corporate expansion and growth.

Aquaneers Inc. was founded January 2016 in Brooklyn, NY and incorporated as a Delaware C-Corporation. Located in the SUNY Downstate Incubator, Aquaneers is a certified START-UP NY business. The company has received SBIR Phase I and Phase II grants of \$1.3M total from the Dept. of Energy to perform R&D into manufacturing plasmonic nanomaterials for solar energy conversion and the photocatalytic utilization of carbon dioxide for methanol synthesis.