



GET IN TOUCH

Let's talk
nanoparticle synthesis

PHONE

(888) 761-7770

WEBSITE

www.PLASResearch.Solutions

EMAIL

info@PLASResearch.Solutions

LINKEDIN

linkedin.com/company/plasrs

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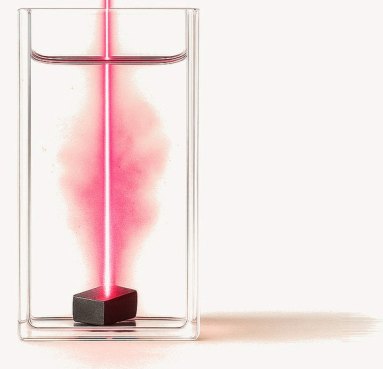


BENCHTOP PLAS PLATFORM

PLAS – Pulsed Laser Ablation in Solution

Autonomous
nanoparticle
synthesis

Closed-loop pulsed laser
ablation in liquid —
reproducible colloidal
batches without manual
endpoint judgment.



MEETING YOU AT

Mechanisms & Barriers in Nanomedicine
Conference-Workshop – 2026 (3rd ed.)

The Golden Hotel, Golden, CO • Sept 10-12, 2026

THE REPRODUCIBILITY PROBLEM

Manual PLAL synthesis doesn't scale to reproducible science

Pulsed laser ablation in liquid produces high-purity, ligand-free colloidal nanoparticles — but conventional open-loop setups rely on operators judging synthesis endpoint by eye or on a fixed timer. The result: batch-to-batch variability that undermines characterization, dosing studies, and regulatory reproducibility requirements.

PLAS — Pulsed Laser Ablation in Solution — builds colloidal nanoparticles directly in liquid through material evaporation and plasma formation from a submerged target, with no precursors, ligands, or reducing agents. The PLAS-100S turns this single-step chemistry into a closed-loop instrument.

THE PLAS-100S APPROACH

Closed-loop synthesis, autonomously terminated

The PLAS-100S combines a Single-Stage Flow Reactor (SSFR) with a Nanosecond Coherent Light Source (NCLS) and inline UV-Vis monitoring. A real-time dOD/dt signal — tracking the rate of change of optical density — is used strictly as a process endpoint detector to autonomously stop ablation once the target condition is reached. It is not used as a proxy for particle size or concentration.

- 01
ABLATE
- 02
FLOW & MIX
- 03
MONITOR dOD/dt
- 04
AUTO-STOP

PLAS-100S — SPECIFICATIONS¹

Particle size	10–100 nm
Productivity	20–200 mg/h
Materials	Fe, Pt, Ti, Zn, Pd, C, Va & oxides
optional	Cu, Au, Ag
Laser source	Fiber, 1064 nm
Pulse / rep. rate	120 ns / 20–60 kHz
Power / voltage	700 W / 110 V
Dimensions ²	460 × 400 × 390 mm
Weight ³	24 kg

WHY IT MATTERS

Ligand-free, solvent-flexible synthesis across ten target materials on a single benchtop instrument — built for labs that need consistent nanoparticle batches without a wet chemistry lab.



SCAN TO VISIT
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or talk to us at the
Golden, CO conference

1 Specifications reflect target design parameters for the PLAS-100S platform, currently under prototype development.
2 Dimensions are for reference only; final unit dimensions may differ and are subject to change without prior notice.
3 Weight is for reference only; final unit weight may differ and is subject to change without prior notice.