

Harrick Scientific Products GATR
Grazing Angle ATR Accessory



In Stock

Used and in Excellent Condition

Open Web Page

<https://www.artisanng.com/52195-1>

All trademarks, brandnames, and brands appearing herein are the property of their respective owners.



Your **definitive** source
for quality pre-owned
equipment.

Artisan Technology Group

(217) 352-9330 | sales@artisanng.com | artisanng.com

- Critical and expedited services
- In stock / Ready-to-ship

- We buy your excess, underutilized, and idle equipment
- Full-service, independent repair center

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.



GATR™

The GATR™ grazing angle ATR accessory is a revolutionary approach to the analysis of monolayers on semiconductor and metallic substrates. The GATR™ is optimized for high sensitivity to these types of samples. Its specially designed pressure applicator is optimized for delivering good contact between the sample and the Ge ATR crystal. The GATR™ provides at least an order of magnitude increase in sensitivity relative to grazing angle methods, in addition to the convenience of an easy to use, fully prealigned, horizontal sampling accessory.

APPLICATIONS

- ▶ Analysis of monolayers and adsorbed species on semiconductors and metals.
- ▶ Rapid, repeatable measurements.

FEATURES

- ▶ Convenient horizontal sampling surface.
- ▶ Built-in pressure applicator optimized for contact with hard samples.
- ▶ 65° fixed incident angle.
- ▶ Ge ATR crystal.
- ▶ Accommodates samples up to 8" in diameter with center-sampling of discs up to 6" in diameter.
- ▶ PermaPurge™ for rapid purging of the system.
- ▶ Optional polarizer for enhanced spectral contrast and orientation studies. Includes slide plate mount.
- ▶ Optional torque screwdriver and slip-clutch for repeatable pressure application.



INCLUDES

- ▶ Ge hemispherical ATR crystal.
- ▶ Built-in pressure applicator, designed to accommodate large samples.
- ▶ Mounting hardware for the specified spectrometer.

ORDERING INFORMATION

GATR™.....	CATALOG No. GATR-XXX*
------------	--------------------------

OPTIONS AND REPLACEMENT PARTS

Slip-Clutch, 56 in-oz.....	SLP-CHI
Torque Screwdriver.....	PTW-SXX
Mounted Ge ATR Crystal.....	GATR-ATR-J
GATR™ Wire Grid Polarizer (KRS-5 substrate). Includes mount and polarizer.....	PWD-GATR-XXX*
Wire Grid Polarizer Mount for the GATR™ (use with PWD Polarizer).....	PWC-GATR-XXX*

**XXX indicates spectrometer make and model*

The GATR™ is a single reflection ATR accessory designed for analyzing monolayers and adsorbed species on semiconductor and metallic substrates.

The GATR™ integrates the theoretical conditions that provide the highest sensitivity to these extremely thin films^{1,2} in a convenient horizontal ATR sampler. The GATR features a 65° incident angle and a Ge ATR crystal for use from 5000 to 650 cm⁻¹. Its specially designed pressure applicator optimizes contact between the sample and the relatively small active portion of the crystal. For greater sensitivity, a polarizer can be added to the GATR and, for repeatable measurements, a torque screwdriver or slip-clutch can be used to maintain consistent contact.

Figures 1 and 2 demonstrate the high sensitivity of the GATR to monolayers. Figure 1 is a spectrum of an organic monolayer on a polished silicon surface. Figure 2 shows the spectrum of a monolayer on a gold-coated glass substrate.

For sampling versatility, the GATR can also be used to analyze liquids, powders, pastes, and other solids. It is especially useful for samples with intense spectral bands. Such samples might otherwise exhibit too high absorbance or band distortions.

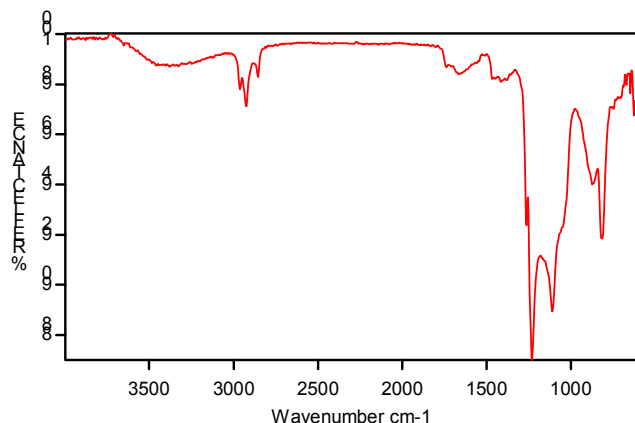


Figure 1. ATR Spectrum of an Organic Monolayer on Silicon.

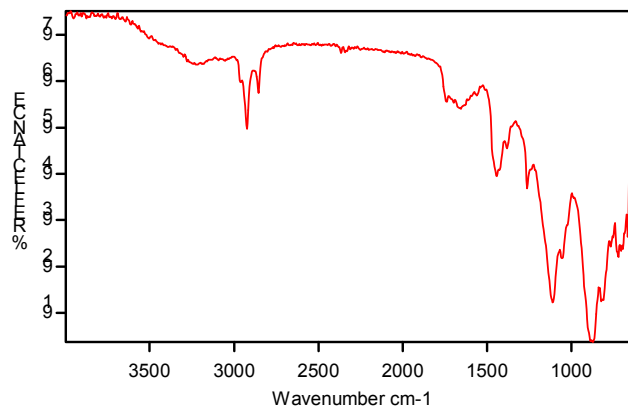


Figure 2. ATR Spectrum of an Organic Monolayer on Gold.

¹ M. Milosevic and S. L. Berets, 'ATR of Monolayers on Si and Neat Powders by Single Reflection ATR,' PittCon 2002 invited paper.

² S.L. Berets and M. Milosevic, 'ATR Spectroscopy of Thin Films on Silicon,' paper in preparation.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at [artisanng.com](https://www.artisanng.com) for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisanng.com | [artisanng.com](https://www.artisanng.com)

