

## **Bruker Unpacks the Science Behind Surfaces in Groundbreaking EPARTRADE Webinar**

*“Metrology and Tribology – Understanding Behavior at the Surface Level” featuring Robert Wang, Technical Account Manager – NA East, Bruker Nano Surfaces and Metrology Division*

EPARTRADE’s *Race Industry Now* webinar series delivered another powerful session with Episode #536, spotlighting the advanced science of surfaces in a discussion titled **“Metrology and Tribology – Understanding Behavior at the Surface Level.”** The episode featured **Robert Wang**, Technical Account Manager – NA East for **Bruker Nano Surfaces and Metrology Division**, and was hosted by **Jeff Hammond**, renowned NASCAR crew chief and SiriusXM personality.

In this deep-dive session, Wang illuminated the role of **metrology and tribology**—fields critical to understanding surface behavior in racing components. From measuring nanometer-level surface roughness to understanding wear mechanisms and friction, the discussion brought clarity to why surface-level science directly impacts performance, reliability, and innovation in motorsports.

“When you think about what happens at the contact points—brake rotors, piston rings, valve lifters—it’s all surface interaction,” said Wang. “Using techniques like 3D optical profilometry or atomic force microscopy, we can measure these surfaces non-destructively and with extreme precision.”

The conversation touched on:

- **Real-world applications** of Bruker’s technologies in engine development, coatings, and materials R&D.
- How **tribological data** can help racing teams reduce friction, extend part life, and gain measurable speed advantages.
- The importance of **surface texture and topography** in everything from thermal transfer to oil film retention.
- Cutting-edge instruments such as **Bruker’s ContourX** and **NanoWizard systems**, and how they’re used by leading race teams and component manufacturers.

Jeff Hammond provided color commentary from the racer's point of view, noting how critical surface science has become in modern racing:

“We always focused on horsepower and aerodynamics, but now we’re realizing the surface behavior of parts is just as critical for staying competitive.”

This episode exemplifies EPARTRADE's mission to educate and connect the global racing industry with the latest in high-performance technology. With over 500 episodes under its belt, the *Race Industry Now* series continues to serve as a vital knowledge hub for engineers, manufacturers, and racing professionals alike.

The full replay of this episode is [available here](#).