



# Ebatco Nano

A Monthly Newsletter

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## **Nano Brief**

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Hello and welcome to Ebatco Nano, a monthly newsletter edited by Ebatco, the leader in nanotechnology services. This is the inaugural issue of our new series of monthly newsletters featuring nanotechnology and surface science. Each month we will share exciting and interesting news and tidbits from around the world of nano. In this first issue, we would like to introduce ourselves to and get acquainted with you. If you are interested in learning more about Ebatco and our nano related products and services, please also contact us through web, email, fax or phone. Let us be the bridge for you to the fantastic world of nano!

## **Ebatco**

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Ebatco is a contract lab services and consulting company specializing in nano and micro technologies. Located in the suburban area of the Twin Cities in Minnesota, Ebatco has been incorporated since July 2007. Better than surviving the latest recession, Ebatco has gone through stages of expansion. Ebatco provides contract lab services through its Nano Analytical and Testing (NAT) Laboratory, supporting local, national and global clients with their nano testing and measurement needs. Ebatco is also marketing and servicing nano-enabling products and analytical instruments from world leading manufacturers. Our product lines include scanning probe microscopes, near-field scanning optical microscopes, micro contact angle meters, nano pore size analyzers, UV-Vis-NIR microspectrometers, confocal and imaging Raman spectrometers, micro abrasive blasters, tribometers, and surface and interfacial tensiometers. In addition to offering first-class lab services and high quality products, Ebatco also provides technical and business consulting services, making Ebatco the one-stop-shop for your nano needs!



Ebatco is lead by Dr. Dehua Yang, the founder, president and chief scientist of the company. Dr. Yang holds a Ph.D. in Physical Chemistry, a M.S. in Solid State Physics and a B.S. in Metal Physics. His expertise and experience spans from nanoscience and nanotechnology to product failure analysis. In addition, he has authored/coauthored more than 50 peer-reviewed publications on nanoscience and nanotechnology, tribology and surface science and engineering related topics. He is an inventor/co-inventor of 6 issued US utility patents. He has served many times as a US National Science Foundation grant review panelist, journal referee, and international conference organizer and session chair. Dr. Yang takes great pleasure whenever Ebatco provides solutions to a client. He is available for consultation on your unmet challenges at [dyang@ebatco.com](mailto:dyang@ebatco.com).

### **NAT Lab**

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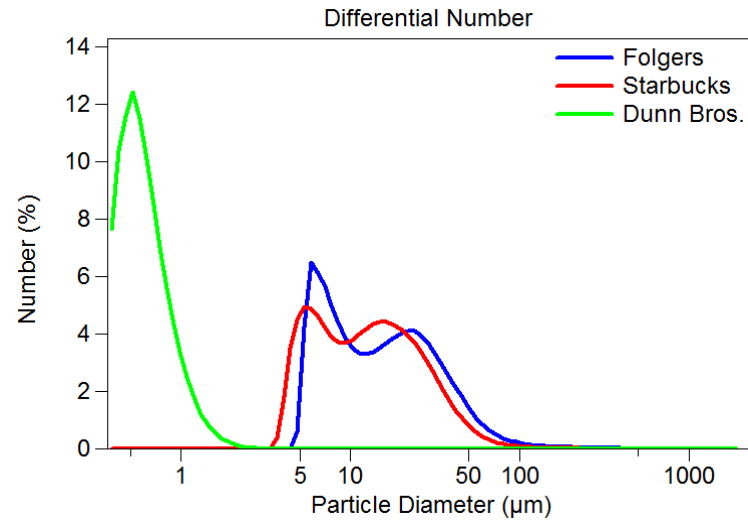
Ebatco's NAT Lab is run by Ryan Farel and Matt Poulter. Ryan is a graduate of the University of Minnesota-Duluth with a B.S. in mechanical engineering. Matt is a graduate of the Iowa State University with a B.S. in materials science and engineering. Together they pool their knowledge and experience in nanoscience, nanotechnology and advanced instruments for testing and measurements to support clients' needs. NAT Lab services include support of clients' R&D of materials and products, process control and optimization, root cause analysis, parts performance verifications, regulatory compliance tests and legal investigations. The NAT Lab endeavors to provide professional services and accurate results to help you solve your challenging issues in a timely and cost-effective manner.

### **Case Study**

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Coffee plays an important role to the start of the day. Coffee is made by grinding coffee beans and immersing the grounds in water. The size of the coffee grounds is crucial to the desired brewing method. Controlling the ground size is also important in creating the optimal flavor. Grounds that are too large won't get fully extracted, while grounds that are too fine will over extract and produce bitter coffee. The size of the coffee grounds can be measured by the Beckman Coulter LS 13 320 Particle Analyzer, equipped in the NAT Lab. The results show a significant difference existing in particle size between two store bought products (Folgers, Starbucks) and a

freshly ground product (Dunn Bros.). If you would like to find out why your coffee tastes better than others, please send us some samples to test out.



Differential number particle size distribution for three commercially available coffee grounds.

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