



Dr. Rebecca Tissot



Dr. Dehua Yang

Dr. Rebecca Tissot has been working as a materials scientist for more than ten years and is the author of 20+ peer reviewed publications. Her work experience spans a wide range of materials testing and fabrication including metals, magnetic materials, ceramics, and nanomaterials in academic, governmental, and industrial settings. At Ebatco, Dr. Tissot heads the Materials Testing and Metallurgy Department, which utilizes techniques such as SEM/EDS, XRD, failure analysis, metallography, and hardness testing.

Dr. Dehua Yang, FASM, is a materials scientist who has more than 30 years of experience spanning critical areas of R&D, manufacturing, and nanotechnology with significant contributions in nano mechanical and nano tribological characterization techniques. In addition, he has authored over 50 scientific publications and holds seven issued patents regarding tribology and nano/surface science. He currently serves as a technical editor for Tribology & Lubrication Technology published by STLE. He has served as the Chair of the Technical Book Committee of ASM International. He is the President and Founder of Ebatco.

### REGISTRATION INFORMATION

Training course seats are limited and may be filled soon. Please contact Ebatco today to register with the following information.

Name:  
Organization:  
Address:

Phone Number:  
Email:

### PAYMENT

Cost for the training is \$495/attendee. Payment can be made by credit and check.

**Credit:** Please call (952) 941-2199 with your credit card information.

**Checks.** Please mail checks to the address listed below.

### QUESTIONS? CONTACT US:

**Ebatco**  
10025 Valley View Road, Ste 150  
Eden Prairie, MN 55344

Phone: 952.941.2199  
Fax: 952.746.8086  
Email: [training@ebatco.com](mailto:training@ebatco.com)

[www.ebatco.com](http://www.ebatco.com)



## X-Ray Characterization for Compositional and Structural Properties

EBATCO ACADEMY  
TRAINING COURSE NO. 3

FEBRUARY 27<sup>TH</sup>, 2020

# Ebatco Academy

## Training Series No. 3

### X-RAY CHARACTERIZATION FOR COMPOSITIONAL AND STRUCTURAL PROPERTIES

Ebatco is a nanotechnology-focused service and development company that builds bridges to the nanotech economy. Ebatco provides one-stop-shop solutions to your daily challenges by providing nano and micro scale analytical lab services, expert-level consultation on nanotechnology applications, and first-class scientific instruments. The Ebatco Academy was created to disseminate scientific and technological knowledge and to provide essential and critical trainings in testing, measurement, and analysis using advanced instruments. The training session scheduled on February 27<sup>th</sup>, 2020 will cover x-ray diffraction, reflectivity, and spectroscopy techniques for measuring stress, strain, crystalline structure, and elemental composition.

#### WHO SHOULD ATTEND?

This series is open to anyone who has some technical background. New and experienced technicians, engineers, analysts, and scientists working in R&D, analytical labs, testing centers, and quality management from the following fields may find the information particularly valuable.

- Adhesives
- Alloys & Steels
- Decorative Coatings
- Medical Devices
- Microelectronics
- Optics
- Paints
- Petroleum
- Polymers & Plastics
- Transportation

#### WHAT YOU WILL LEARN

Attendees will get exposure to a variety of areas related to characterization options available using x-ray techniques. The training is limited to fewer than 30 participants to encourage engagement and discussion. Topics to be covered include the following:

- Crystalline Structure Determination
- Energy Dispersive X-Ray Spectroscopy (EDS)
- Instrument Limitations
- Powder X-Ray Diffraction (XRD)
- Quantitative Composition
- Relevant Testing Considerations
- Residual Stress
- Texture and Epitaxy
- Unknown Identification
- X-Ray Reflectivity
- And more!

#### EVENT DETAILS

When: February 27<sup>th</sup>, 2020

Where: 10025 Valley View Rd

Suite 150

Eden Prairie, MN 55344

Cost: \$495/attendee

\*Cost includes training instruction and materials, lunch and refreshments. Travel and lodging not included\*

## Schedule of Events

8:00 – 8:30 am  
Registration, Coffee and Donuts

8:30 – 9:00 am  
Welcome and Introduction

9:00 – 10:00 am  
Elemental Composition Determination via EDS

10:00 – 10:15 am  
Coffee Break

10:15 – 11:30 pm  
EDS Demo

11:30 – 12:00 pm  
Guided Tour of Ebatco Laboratories

12:00 – 1:00 pm  
Lunch on Site

1:00 – 2:00 pm  
XRD for Phase Composition Determination

2:00 – 2:15 pm  
Coffee Break

2:15 – 3:15 pm  
XRD for Residual Stress and Thin Films

3:15 – 4:15 pm  
XRD Demo

4:15 – 4:30 pm  
Q&A and Training Course Survey