



Gemmological
Research
Industries Inc.



DAY 2: Colourless Diamonds

Identifying of Natural, Treated and Synthetic Diamonds with Standard and Advanced Instruments

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November 24, 2019 (Sunday) at DMCC, Jumeirah Lakes Towers, Dubai, UAE

9am-12.30pm: IDENTIFICATION of NATURAL and SYNTHETIC DIAMONDS

- **Types of diamonds** based on nitrogen and boron content
- **Colourless Natural diamonds:** sources, characteristics and identification
- **Methods of growing** HPHT and CVD diamonds
- **Inclusions** in Natural and Synthetic diamonds
- **UV lamp** – reaction of different types of diamonds under LW and SW UV light (“PL inspector”)
- **CPF (Cross Polarized Filters) method** and instrumentation to screen and ID diamond’s origin

PRACTICAL: Samples of Ia, IIa, IIb, Ib diamonds (natural synthetic origin) are tested with microscopes, UV lamp (“PL inspector”), Mini Polaroscope with light, EXA, Alrosa Diamond Inspector

1.30-5.00pm: SCREENING for TREATMENTS of NATURAL and SYNTHETIC DIAMONDS

- **Clarity and Color Enhancements - unstable** (fracture filling and coating)
- **Clarity Enhancements - stable** (traditional lasering, KM Laser drilling)
- **Testing and screening methods for treated diamonds** with standard instruments
- **Post treatments of CVD-grown** colorless diamonds (by HPHT press)
- **ID of HPHT-enhanced diamonds** using advanced instruments
- **ID of mounted synthetic diamonds** with EXA, Alrosa Inspector and screening instruments
- Problems and solution in identification of **melee natural and synthetic diamonds**

PRACTICAL: Colorless Diamonds are tested with microscopes, mini UV lamps, portable polariscopes, Gempen and portable spectrometer (**EXA**) for natural, treated or synthetic origin

- **Portable “Synthetic Diamond ID Kit”, Alrosa Diamond Inspector, EXA machine** are available
- **Certificate of completion** will be issued to all participants

Cost: US\$395/AED 1,450 Please pay by credit card to www.brankogems.com or contact **GSI Dubai**