

News

NEWS

13/07/2011

Launch of Contributions to Gemology No.10 at ETH Zurich

New andesine test developed by GRS needs high-tech testing at highest level in cooperation with Swiss Universities. Only stones from particular mines can be tested with non-destructive methods. Others need additional destructive testing. Testing is only possible through our Swiss office.

Red andesine from different collection points in Tibet have been tested for authenticity. Copper-bearing red andesine from the so-called new mines in Tibet (first reported in 2010) can be discriminated from diffusion-treated counterparts using high-resolution analytical techniques and methods.

The geological process of Tibetan andesine formation involved the circulation of sulfur-rich fluids that enriched Copper in the feldspars, producing a characteristic natural chemical signature.

The authenticity protocol used in this work is based on elemental fingerprints, isotopic ratio determinations of copper and argon, and micro chemical fluid inclusion analyses. Our measurements for hand-collected materials from the old mines (first reported in 2008) partly confirm them as authentic. Instead, most of the faceted gem quality stones in the market overlap with the chemical fingerprints of diffusion-treated andesine. The authenticity remains undeterminable unless destructive methods can be used for testing. Registered at the Library of Congress, Washington, US Library of Congress RegNo 1-627542300.



Adolf Peretti emphasizing the role and increasing importance of the Contributions to Gemology books for solving problems of the gemological industry and collects advice from the Swiss experts.



Adolf Peretti signs the new Contributions to Gemology No. 10



Two of the authors Adolf Peretti and Gisela Fontaine enjoy the progress of the work with the analysis of the new mine material from Tibet.



Intense discussions between three of the authors on future projects and testing protocols of Tibetan andesine.



Group photo with the authors Mario Meier (PhD student University Fribourg), Detlef Günther, Igor Villa (holding a previous Contributions to Gemology book), Adolf Peretti and Elmar Peretti



Group photo with the Günther group and GRS staff, from left to the right the authors Prof. Igor Villa (from the University of Berne), Prof. Detlef Günther (presenting the new journal), Dr Adolf Peretti with daughter Francesca Peretti (GRS), Dr Elmar Peretti (consultant for GRS) and Willy Bieri from GRS (background PhD students of the Günther group).

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