

Yellow Topaz from Germany, Emerald Mining in Austria's Habachtal Region, a Return to Tucson, and More...



Welcome to the Spring 2022 issue of *Gems & Gemology*! For our industry, February is marked by the Tucson gem shows, and we're delighted to share content from our highly anticipated return to Tucson. With our two feature articles, our regular columns, the debut of a new regular feature, and the annual *G&G* Challenge, there's something for everyone in this issue.

In our lead article, Manuela Zeug and coauthors explore yellow topaz from the Schneckenstein crag in Saxony, Germany. The article provides a comprehensive summary of mineral, chemical, and spectroscopic investigations of Schneckenstein topaz, with an emphasis on luminescence studied by excitation-emission spectroscopy. This study offers a new perspective on previous mineralogical studies, which focused mainly on crystal forms and trace element geochemistry.

Our second feature article revisits the history of emerald mining in Austria's Habachtal region. In the second installment of his two-part series, Karl Schmetzer traces the history of the Habachtal mine during the era between World Wars I and II, using a variety of largely unpublished sources from Austrian and German archives.

Our regular features have much to offer, too. Among the variety of snapshots in *Lab Notes*, we report on two notable laboratory-grown diamonds recently examined by GIA: a new record-size CVD diamond and one with unusual laser drill holes. *Micro-World* offers a glimpse into the inner landscapes of gemstones, including a before-and-after comparison of an oiled apatite cabochon, a complex fluid inclusion in topaz, and a garnet crystal inclusion in aquamarine. Our *Gem News International* section features more than 30 pages of coverage from the 2022 Tucson shows, with market updates, interesting and noteworthy finds, and interviews with dealers, cutters, and designers. Other highlights from *Gem News International* include a study of irradiation treatment in amber and the discovery of davemaoite in a diamond from the earth's lower mantle.

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This issue also includes the debut of an exciting new section: *Diamond Reflections*. In his first installment, Evan M. Smith explores the potential role of modern-day deep-focus earthquakes on diamond growth.

Also in this issue: Be sure to take the annual *G&G* Challenge quiz, which offers the chance to test your gemological knowledge of our feature articles from 2021. And we congratulate the winners of this year's Dr. Edward J. Gübelin Most Valuable Article Award.

We hope you enjoy the Spring edition of *Gems & Gemology*!

A handwritten signature in black ink, appearing to read 'Duncan Pay'. The signature is fluid and cursive, with a large 'D' and 'P'.

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