

Crysilliz

By James Evans, EG



Most gemstones are silicates. The purist form of silicate is silica, which displays a phenomenal range of optical effects: from the silky chatoyancy of Tiger's-eye to the play-of-colour of Precious Opal. Replace silica's oxygen with carbon and we obtain Moissanite – a gem with even more brilliance than diamond. But what we see here is Crysilliz: Pure elemental silicon.

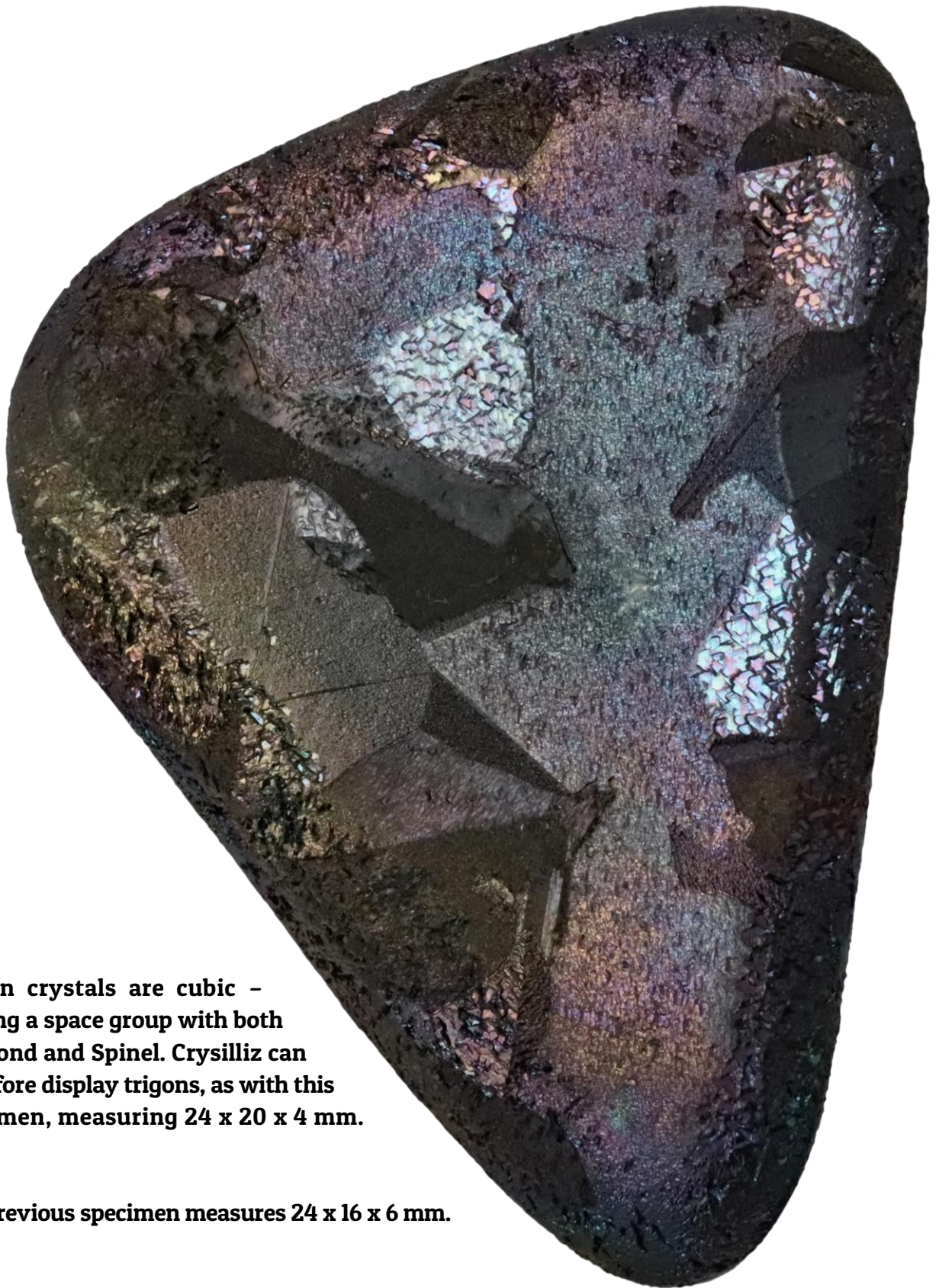
Crysilliz was developed by Roy Goldberg and 'Pinfire - Gems & Colloids'. The name is a portmanteau of 'crystalline silizium' (the latter being the German term for silicon). Crysilliz is a polycrystalline material with a Mohs hardness of 6 and a specific gravity of 2.33 - 2.34.

The material has a metallic lustre, sometimes muted by an iridescent sheen (caused by surface layers of silica). Each piece shows a unique pattern variously reminiscent of rainbow obsidian (yet another form of silica), the 'Thompson structure' of iron-nickel meteorites, or Picasso's wartime masterpiece, *Guernica*.



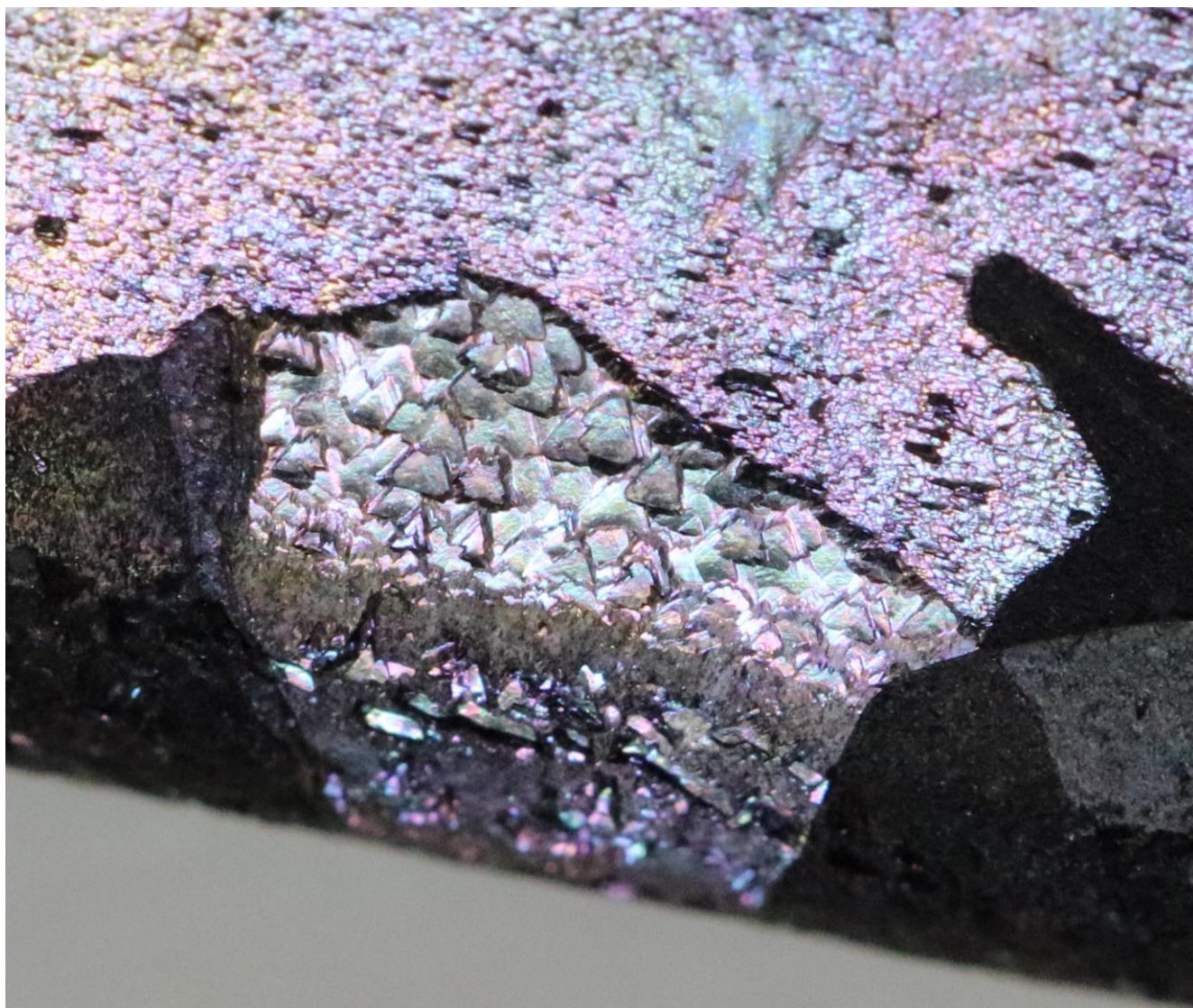
A specimen of Crysilliz – shown front and back – measuring 29 x 25 x 6 mm).





Silicon crystals are cubic – sharing a space group with both Diamond and Spinel. Crystals can therefore display trigons, as with this specimen, measuring 24 x 20 x 4 mm.

The previous specimen measures 24 x 16 x 6 mm.



Trigons on the surface of a Crysilliz. Field of view 7 mm across.