

Moonstone, Labradorite and Opal Why embed in resin?

Embedding these gemstones in resin enhances their natural play of colours by making light pass through a denser medium. The two-part UV stabilised styrene monomer resin has the same Refractive Index (a measure of the bending, or refraction, of a beam of light on entering a denser medium) as Crown glass (about 1.54). The use of darker resin as a background in my designs further enhances this play of colours.

Resin also protects these “soft” gemstones (~ 6 on the Mohs score for rock hardness) from wear and tear and, in the case of opals, from dehydration which can cause crazing and loss of “fire”.

Moonstone (potassium aluminium silicate) and **Labradorite** (sodium calcium aluminosilicate) are types of feldspar, a component of igneous rock formed by solidification from a molten state. Moonstone usually exists as the mineral adularia. This name is derived from the sheen (adularescence) caused by light reflecting internally in the moonstone when layers of different feldspars are formed as the mineral cools down. It is this adularescence which is prized and which is enhanced by the use of resin-embedding in my jewellery



Ethiopian opal earrings with moonstone and Australian opals set against a black background

Opal (a sedimentary rock) is in fact a hydrated silica gel, deposited at relatively low temperatures in the fissures and cavities of almost any type of rock. Opal deposits also form in and around fossil specimens. Their average water content is about 10 %, but can be as high as 20%.

The structure of opal consists of more or less uniform-sized spheres of silica gel closely packed in stacked planes; colour and hence quality are determined by the diffraction of light (itself determined by sphere size and packing uniformity) as it passes through this infrastructure.

The highly prized colour of Australian black opal is due to the presence of volcanic ash. My new collection of jewellery uses Ethiopian opals which display magnificent play of colours at affordable prices.

The word “opal” comes from the Latin “*opalus*”, itself derived from the Greek “*opallios*” which shares a common root with the Sanskrit word “*upála*” meaning “stone”.

