

Creating a masterpiece: the materials and techniques of the London version of van Gogh's *Sunflowers*

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In Arles, during the summer of 1888 and early in 1898, van Gogh painted a number of studies of sunflowers, including perhaps his most famous work showing a large bunch of sunflowers in a vase against a yellow background. Three variations of this composition are known, raising interesting questions about their creation. The two signed versions, now in the National Gallery in London and the Van Gogh Museum in Amsterdam, have been the focus of extensive research; the London painting is now believed to be the first version [1]. Much is known from the previous work on the London and Amsterdam versions of the paintings and the wider research on works by van Gogh – and indeed from van Gogh's own letters – about his working practices and choice of materials, and about how these materials and therefore the appearance of his paintings have altered [e.g. 2–7].

Stimulated by this on-going research and the recent acquisition of a macro X-ray fluorescence (MA-XRF) scanner by the National Gallery, a detailed re-examination of the London painting was undertaken. Examination by MA-XRF was complemented by high resolution and 3D-imaging, with data interpretation aided by analytical results from a number of paint samples taken from the painting in 1993, supplemented by recent further analyses prompted by new questions arising from the MA-XRF investigation. This presentation will focus on the creation of the London version of the *Sunflowers* and will present new findings relating to the materials used and van Gogh's painting technique.



Detail from van Gogh's *Sunflowers* (National Gallery, NG3863) and RGB composite MA-XRF map of Pb/Cr/Zn

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