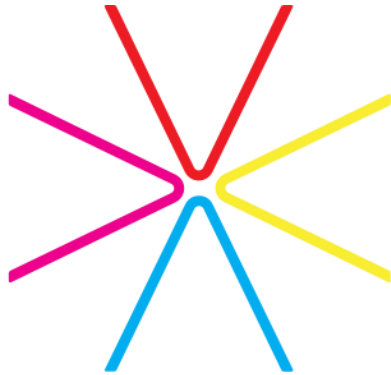


Welcome to the Turner Museum of Glass



Welcome to the Turner Museum of Glass, here we have of the UK's most interesting and comprehensive collections of nineteenth and twentieth century glass. The Museum was founded in 1943 by Professor W.E.S. Turner. Also responsible for founding the academic discipline of glass technology, Turner was a keen and imaginative collector. He wanted the Museum to act as an inspiration for all those working with glass by showing beautiful objects alongside technical innovation. Turner founded his Museum at the University of Sheffield where he worked. Turner's vision and commitment ensured the successful development of glass making techniques as well as a fruitful dialogue between manufacturers and researchers. During his long career, Turner travelled widely. These visits were instrumental in establishing an atmosphere of international collaboration. They also allowed him to develop the unique collection, which formed the Turner Museum of Glass. The Museum was opened in 1943, two years before Turner retired from the University. Here in this cabinet, we have Turners OBE which he gained in 1919 by appointment by King George V. Additional accolades from academic and commemorative glass objects are combined with the achievements from the University following on from his legacy. For more information on pieces within our collection, look for stickers with the Lingar logo and scan them in the Lingar app!

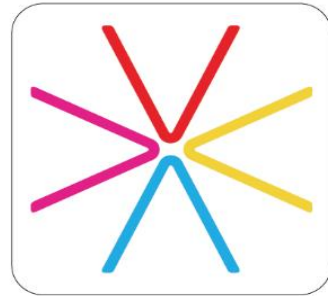
Using Lingar In The Turner Museum Of Glass



L I N G A R

When in the Turner Museum, look for the Lingar logo, this means that you can use the Lingar app to find out more about the collection! If you see a sticker with the Lingar logo, scan either the sticker or the object it points to using the Lingar app and you will be shown more information about it. This could include videos, audio descriptions, or even 3d animations. To see a video on how to use Lingar in the museum, click the video icon (the rectangle with the play button inside).

Frigger

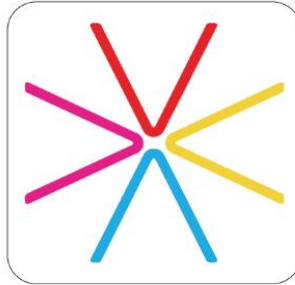


1

A Ship Made on a Whim

Friggers, sometimes referred to as “whimsies”, were termed “end-of-day” objects in the glassmaking industry. When glass was left in the melt pot at the end of the working day and the glassmakers had spare time, items would be made with no specific planning or intent (on a whim). These items would often be brought home to families or given as gifts by the glassmakers. This particular frigger was donated by a local glassmaker and features whimsical blue sailors climbing its sails.

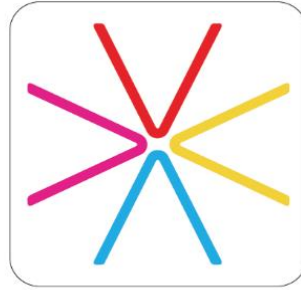
Millefiori Vase - Fratelli Toso



2

Millefiori, coming from the Italian to mean “thousand flowers”, is an art technique dating back millennia widely incorporated into glass art, particularly on the Isle of Murano. To produce this effect, a precursor known as murrine is made from glass cane. The cane starts as a larger piece consisting of many individually coloured rods arranged to give the required cross section. These are drawn at high temperature into a longer rod. The initial pattern is preserved because of the viscosity of the glass but on a reduced scale. This long rod can then be chopped to produce smaller pieces with the pattern in the cross section. A similar process is used to make the confectionary “rock” commonly sold at tourist locations across the UK. This stretched rod is cut into smaller discs, known as murrine, which are assembled into the millefiori patterns. This vase will have been made by rolling a hot glass gather on a table of murrine and then blown and shaped. This particular vase was created by workers at the Fratelli Toso glassworks on Murano while Turner watched on. The company was founded by the six sons of Pietro Toso in 1854 and is still operated by his descendants. Several other pieces in the museum collection are in the millefiori style, for example the paperweight in the Scottish glass cabinet.

Jacobite Wine Glasses

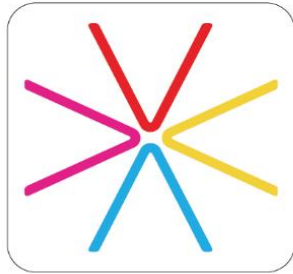


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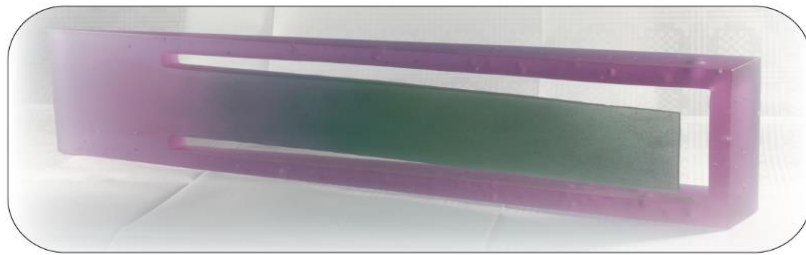
Raise a Glass!

"Fiat Style Glass" The Jacobite period is characterised by constant local and national upheavals across Scotland, England and Wales. These waves of patriotism in support of the dethroned Stuart monarchy persisted over a 56-year period, spanning three generations of Stuarts 'Kings'. Glass INV 172, slightly differs from INV 171, specifically fusing the history of the Stuart Monarchy with Jacobite support. The inclusion of an oak leaf references the escape of King Charles II during the English Civil War in 1651 and is a symbol of restoration and regeneration. It connects the complicated relationship between the Stuarts and the English Crown. "Butterfly Style Glass" British identity was formed in this period through anti-French sentiment and strong ties to the Empire and Protestantism. Therefore, drinking French wine and toasting to a deposed Royal Catholic dynasty was the ultimate treasonous affair. The wine glasses represent a society still disunited through the changes in religious beliefs, first enacted under Henry VIII. The inclusion of the butterfly within the 176 Wine glass connects the support for the Stuarts' grand return from exile. Resembling a butterfly coming out a chrysalis, sunflowers were additionally engraved to represent loyal Jacobite members following the sun like the flower. The glasses' continual theme of nature, grounds Jacobite support in the countryside rather than the cities. The stem of INV176 contrasts to those of INV171 and 172; its 'double series white twist' displays the skill of its maker and adds extra quality and rarity to the glass. "Thistle Style Glass" The Stuarts as a Scottish dynasty where always well supported in the area but a resurgence in patriotism swept across Scotland, England and Wales in 1688. Although King James II represents the Jacobite rule of the period, his son Prince James Edward known as the 'Old Pretender' and his grandson, Prince Charles Edward, known as ' Bonnie Prince Charles' contested the throne on many occasions, choosing Scotland to wage an assault on the throne. The use of the Thistle directly connects to the Scottish ancestry of the Stuarts. An image of thistles encircled by a crown was an ancient badge of Scotland. The detail within this glass is exceptional. With multiple air twists and multiple knops, this glass in top condition would be the most expensive of the Jacobite collection. Although the provenance of 179 is unknown, the Scottish artist Robert Strange produced Jacobite 'Amen' glasses between 1743 and 1749. As a trained engraver his work can be seen in both the British Museum and at the Metropolitan museums of Modern art in New York. While Strange's detail is beautifully profound, the detail in the glass shape is not as rare or celebrated as this collection detailed stem craftsmanship.

Aperture - Galia Amsel



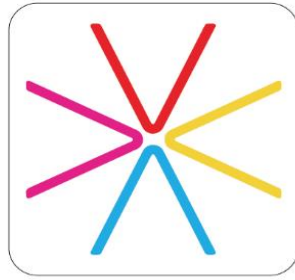
4



One Of Several: Capturing Form

Aperture 1 is a cast glass artwork produced by British born glass artist Galia Amsel (1967) in 2001. It was acquired in 2002 from the Crafts Council Shop and added to the collection along with the piece entitled “Jazz Box”, with support from the National Art Collections Fund. The bulk of the piece is a lavender lead crystal glass with spruce green glass used in its centre. The colours are translucent and display a subtle gradient. Casting glass is difficult and such a large piece requires slow, well-controlled cooling. This is known as annealing and reduces the likelihood of fracture. This piece is one of a series of numbered glass creations sharing the name Aperture and is believed to be the first. Each Aperture is different in colour and some having alternative names; for example, Aperture 5 has the name “Hope” and is coloured dark purple and pale blue. Galia Amsel has been an active glass artist for over 20 years. Her first solo exhibition in 1997 was in Paris, France. She trained at several institutions and earned a Masters in Glass at the Royal College of Art in London. She is currently producing glass artwork in New Zealand where she moved to in 2003. Her work encompasses several skills including glass blowing and the lost-wax technique (used to produce Aperture), often focusing on sculptural works that incorporate texture and motion.

Candlestick - Thomas Webb and Corbett Ltd



5

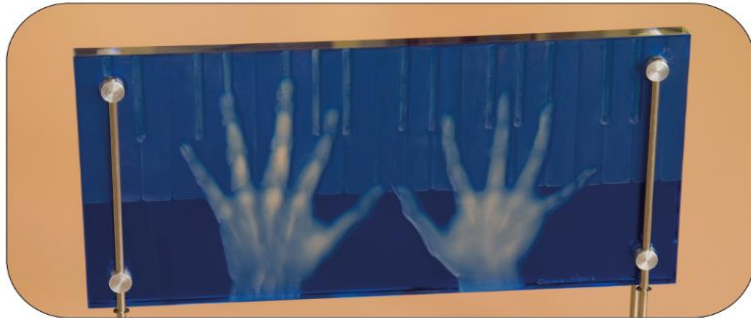
Light with a Leaf

This candlestick was produced by the glassmakers Thomas Webb and Corbett Ltd based in Wordsley, Stourbridge around the start of the 20th century. Typically, they made high quality vases and tableware. Cut and engraved glassware were their most popular products but they also made other items such as stone-coloured vases and candlesticks. They regularly incorporated flower, leaf, and fruit designs in their work such as the leaf like design in the handle of the candlestick. This is described as a Vaseline glass. These glasses contain small amounts of uranium as colouring agents in their composition, but usually have a different appearance with American Depression glass being typical.

Dischord - Denis Mann



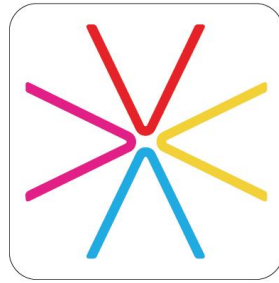
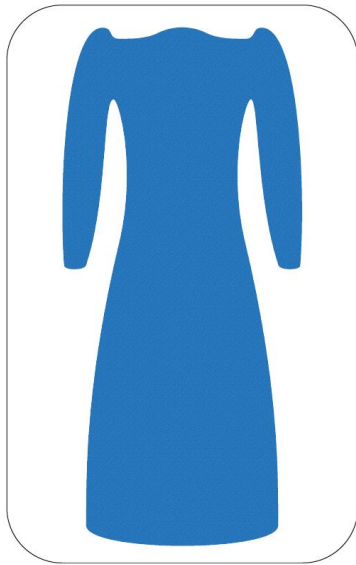
6



A Sound Captured In Glass

A left and right hand have been engraved in blue flashed glass over a keyboard. Each is playing a different chord. The left hand is playing a diminished seventh chord starting from C while the right hand playing a dominant seventh also starting from C. These two chords are used throughout western music, but together they make a particularly dissonant sound, a discord, hence the title of the piece. Flashed glass is a glass art technique that involves coating a clear glass with thin layers of coloured glass whilst still partially molten. After adding the coloured coating, the glass is shaped and cooled. Finally, a copper wheel engraver carefully removes the coloured glass to create the final image. Denis Mann (born 1935) is a Scottish artist from Perthshire. He studied under Helen Munro Turner (Turner's second wife) at the Edinburgh College of Art and specialised in copper wheel engraving. A lathe he used to do this once belonging to Helen Munro Turner and is now believed to be over 150 years old.

Glass Wedding Dress - Messrs Pettigrew and Stephens, Glasgow

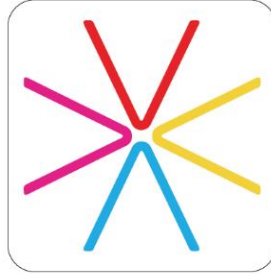


7

A Special Dress for a Special Day

One of the most interesting items in the museum is the wedding dress worn by Helen Munro Turner, Professor Turner's second wife, on their wedding day in July of 1943. The ensemble of dress, hat, handbag, and shoes are almost entirely made from blue glass fibres produced in Glasgow by Glass Fibre Limited. Helen wanted glass to be a part of her wedding attire, being a glass artist by trade, and initially considered a glass ribbon which soon became the whole dress and accessories. A researcher from the Deutschen Museum in München has recently investigated the deterioration of the glass in this wedding dress as part of a worldwide study on preservation. This study included the dress worn by Infanta Eulalia of Spain made in 1893. The material was not particularly comfortable to wear and there are some minor blood stains on the inside of the shoe! A major advantage of a fibre glass wedding dress at the time, was that it was not rationed and did not need coupons like silk. Turner's dress is amongst the one hundred objects in their "A History of the World – 100 British Museum Objects" series.

Lithyalin Jug - Frederich Eggerman

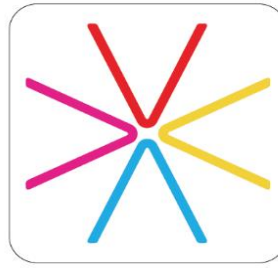
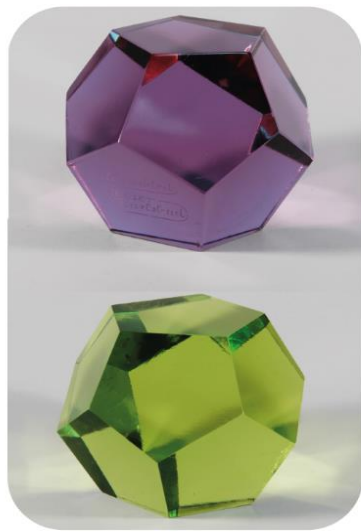


8

Glass That Looks Like Stone

Coming from the Greek word “lithos” meaning stone, the Lithyalin style of glass was developed by bohemian glass artist Friedrich Eggerman in order to mimic semi-precious stones. The jug that is a part of the Turner Museum collection has been made to have the appearance of ruby agate. A wide variety of Lithyalin glassware was produced during Eggerman’s career with most having faceted surfaces and in a range of colours including greens and yellows.

Paperweights – Moser

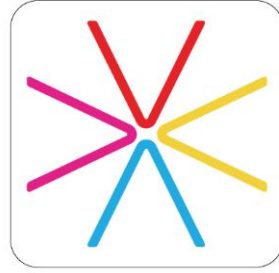


9

Colour Through Unique Methods

Our set of four paperweights acquired in 1931 were made by the company Moser, founded in 1857. Each is cut as a (12 sided) dodecahedron. The amber sample is inscribed, “Heliolit, Moser, Karlsbad”, Karlsbad being the German name for Karlovy Vary in Czechia. Moser is known for its high-quality crystal glass and from 1915 its vibrant colours. created by adding elements such as cobalt (blue); the names given such as “ametyst” and “saphir” suggested precious gems. After the founder Ludwig Moser died in 1916, the company passed to his sons Leo, Richard, and Gustav. Leo pioneered the use of rare earth oxide colorants. Our red paperweight used neodymium and selenium, the purple one neodymium (“Alexandrit”) , neodymium with praseodymium created amber and finally praseodymium on its own gave olive green. The “Alexandrit” glass is dichroic. Its colour appears to change with different sources of illumination, lilac under natural sunlight but smoky blue under a fluorescent lamp. Our neodymium doped vases display a similar effect for different thicknesses. Today, metallic neodymium and praseodymium are used in the ultra-strong magnets needed for wind turbine generators. Neodymium doped glasses are used for lasers.

Oval Bowl by Ann Wolf

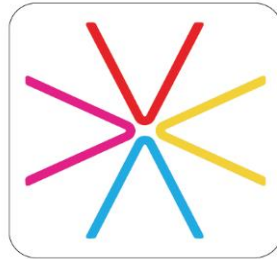


10

A Prestigious Female Artist Depicting Women

Ann Wolf nee Warff was considered one of the founding artist of the international studio glass movement and this piece was purchased from her in 1984. It depicts women, rabbits, and also some conical structures in case green glass with a red opaque rim. Wolf was born in Germany in 1937 and has been known for many of her works depicting and incorporating the position of women in society and the relationships between women. This particular piece has been loaned out in the past to the Weston Park museum for an exhibit.

Engraved Plaque - Wilhelm Von Eiff

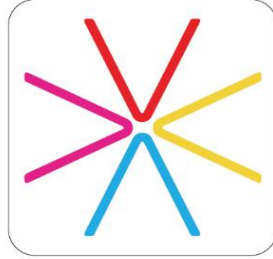
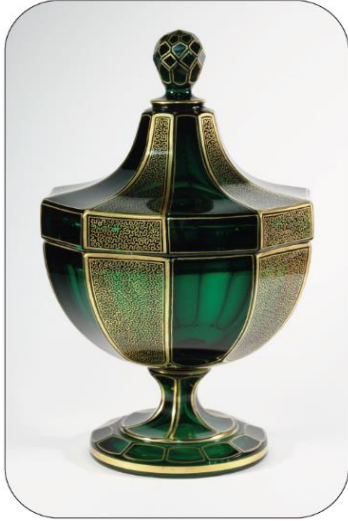


11

A Gift From a Friend

This engraved piece of glass set in ebonite was presented to Turner in 1936 and designed by Professor Wilhelm Von Eiff, who taught Helen Munro Turner before she married Prof Turner) The colourless glass has been engraved with a mother and child motif, similar to that of the Madonna and Child, with a variety of other motifs including eagles and stars. Ebonite, from which the base is made, is a form of hard rubber that is considered to be one of the first synthetic resins. Wilhelm Von Eiff was a highly influential German painter and glass artist between the two world wars. His specialities included relief cut, in which glass is cut and engraved to produce an image that stands proud of the glass surface. He particularly worked in portrait cuts, similar to this engraved plaque. Teaching at the Stuttgart School of Applied Arts between 1921 and 1943, he specialised in glass and gemstone processing. Professor Von Eiff often made gifts for people which were closely tailored to the recipient. Our piece though has several elements that are unexplained and open to interpretation. A symbol just beneath the glass in the ebonite base is similar to characters from other languages but its meaning is also unclear.

Green Gilded Urn

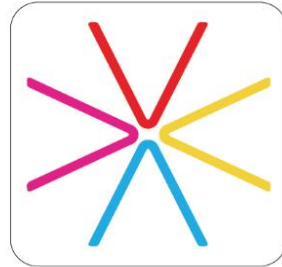


12

Pristine Yet Fragile

This piece was produced by Josephinenhütte Schreiberhau in Germany. The urn is made using a remarkable green glass and alternate faces are gilded with gold. Gilding is the application of thin gold decoration to artwork such as portrait frames, sculptures and ornamental dinnerware. This thin layer resists degradation by sunlight or chemical attack and well cared for objects can remain in pristine condition. The gold though is soft and easily rubbed off so accidental damage is easy. This style of urn was produced in several other sizes ranging from 12 cm to 31.5 cm but is rarely found.

Cameo Vase by Legras

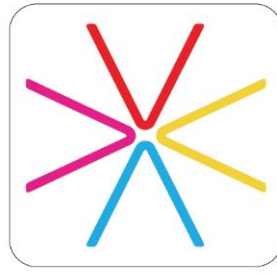


13

From Humble Beginnings

This large glass vase with a bulbous base and long cylindrical neck was produced around 1920 by the établissement Legras at the St Denis glassworks, in Paris. Its surface has been acid etched to create a leafy design. After humble beginnings as a woodsman, François-Théodore Legras began to work with glass in the 1850s, developing frosted glass artwork. He moved to the St Denis factory and created the Legras establishment where he developed his own iconic styles including enamel painted glasses, cameo cut vases and acid-etched pieces. The Legras style of glass artwork became famous for its landscapes and flowers such as chrysanthemums. The Legras family, particularly Charles a nephew of François, continued the family business until 1928, when ownership passed to its workers. W.E.S Turner visited the factory in 1932.

Rouge Flambé Vase by Frederick Carder

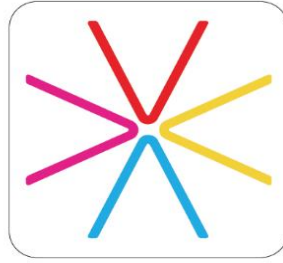


14

Modern Interpretation of an Ancient Style

This vase was produced several times between 1916 and 1917 as well as later in 1926. It is a footless vase produced in the style of Sang de Boeuf Chinese ceramics. The process of producing such a piece was difficult and as a result, this vase was never produced commercially. The vivid red colour is produced by the additions of selenium and cadmium sulphide to the glass melt. Frederick Carder, was a close friend of WES Turner and donated many pieces to the museum collection that employ a variety of new techniques, as was popular in the American glass art movement. These include the Aurene glassware with a brilliant golden sheen as can be seen in some of the other pieces within this cabinet. Carder started producing glass art in Stourbridge, Staffordshire but later moved to the USA, cofounding the Steuben Glass Works in Corning, New York state. Throughout his career Frederick produced many pieces and developed numerous techniques as well as meeting individuals such as Peter Fabergé (famous for his jewelled Fabergé eggs). Later in his career, Carder worked on and developed glass casting using the lost wax method on which he later released his notes and formulas to those wishing to cast glass.

Bowl by Rachael Woodman

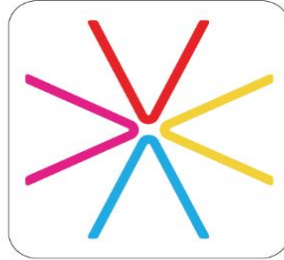


15

A New Style

This bowl was purchased from glass artist Rachel Woodman in 1990. The opaque black glass has been ground and etched with acid to produce the overall matte finish of the piece. Rachael Woodman is one of many studio glass artist, those who work in smaller scale facilities in order to produce new artwork. They may work with new and experimental techniques, or produce artwork that employs traditional techniques but with modern interpretations in order to produce new artwork. Many of these artists sell their work through galleries. Woodman regularly produces new work and often creates series of pieces such as her “Offering” series with glass artwork that depicts plates filled with abstract food.

Kiln Fused Bowl by Wayne Charmer

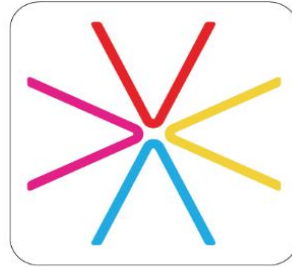


16

Where Art Meets Industry

A series of strips of glass fused together in a kiln, this artwork combines glass art techniques with a common glass production method. We rarely think much about our windows; we look through them and not at them but their production is remarkable. They are made by the “Float glass” process, where the molten glass is floated on molten tin. Both upward and downward facing surfaces become smooth and have high optical quality. It is a fully automated processes controlling thickness, cooling, and cutting. For this bowl strips of Float glass have been laid in a mould and heated in a kiln. This has allowed the strips of glass to fuse together and slowly deform into the shape of a bowl. The pale green colour is due to iron impurities in the glass and a longer than normal light path through the glass.

Turner's Mosaic: Glassmaking Through The Centuries

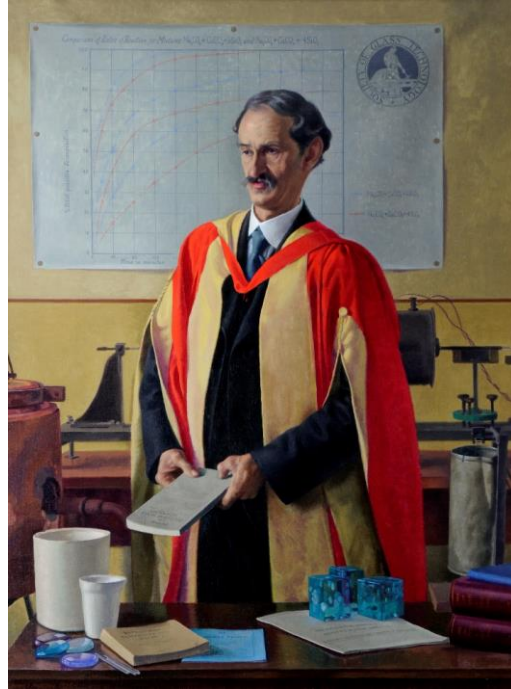


17

A Mosaic Dedicated To A Loved One

This mosaic illustrates the geographical origins of glass-making in the ancient world. Tell El-Amarna was the site of one of the oldest factories, operating around 1400 BCE. The second cabinet from the entrance has artefacts from Ancient Egypt. An image of the famous Portland vase is also shown; made in the first century AD, it remains a fine example of Roman glass. The mosaic was created by James Powell & Sons Ltd, led by James Hogan, in 1941 at the behest of Prof Turner as a memorial to Mary Isobel Turner (1878-1939) his first wife. It was financed by a gift of £250, around £13,000 today, provided by Professor Turner and his colleagues. named on the mosaic. It was initially placed in the Elmfield building, the home of Turner's Department of Glass Technology, although installation had to wait until the end of the second world war. The mosaic was moved in 1993 to the Sir Robert Hadfield Building with the Turner Museum Collection into the newly created department of Materials Science and Engineering.

Portrait of Professor W.E.S Turner by Edward Halliday (1902-1984)



Dr W. E. S. Turner, was a chemistry lecturer at The University of Sheffield from 1904. He is responsible for founding the academic discipline of glass technology in 1916, bringing together all those interested in glass production and the application of scientific methods to industrial problems. The main objects shown in the portrait are the journals and publications; Turner is holding a book in his hand which is the Journal of the Society of Glass Technology (SGT). Many of the objects in the portrait demonstrate Turner's full commitment to the SGT which he was the Secretary for and edited every journal publication up until 1951. There is a poster on the wall behind Turner with the SGT logo and a graph which indicates the research and academic approach Turner showed towards the science of glass manufacture. There are also some small glass disks in the foreground of the portrait, these are small samples used in some of the tests carried out on glass materials. This type of sample is still used in the Department of Materials Science and Engineering to this day. In 1914, Turner was responsible for the setting up of a Scientific Advisory Committee of the University of Sheffield to deal with technical problems arising in the local industries and, following on this work, prepared a report on the conditions in the glass industry. This is shown in the portrait on Turner's desk along with other pamphlets which would support Turner's research and something he would have contributed to. In 1915, he developed the Department of Glass Manufacture which then became the Department of Glass Technology in 1916. In this year, he developed the Society of Glass Technology (SGT) which was inaugurated at a meeting at the University of Sheffield, on Thursday November 18th 1916. On display in the first cabinet when you enter the museum, is Turner's OBE (Order of the British Empire). He was awarded his OBE in 1919 for his application of science to the glass industry. This is only a few years after starting the SGT and the Department of Glass Technology at the University of Sheffield. This shows how advanced Turner's research was and how important his contributions were considered towards glass technology during these years. In 1938, he was appointed a Fellow of the Royal Society, the oldest known scientific academy. This portrait may have been commissioned as part of this recognition because it is a prestigious award, along with his other achievements and commitment toward the scientific principles of glass manufacture.