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**FX**

# Enduring Materials: Sanitary Ware Ceramics



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## Welcome

With a history going back thousands of years, ceramic is a material that continues to play a part in our everyday environments, despite the emergence of a huge array of new materials and technology.

From the most primitive-yet-functional pots and vases, to ornate, decorative pieces of art, right through to large-scale, highly industrial applications, ceramic has been used in truly diverse ways. Its combination of aesthetics, strength and hard-wearing properties make it perfect for architectural and interior use in particular.

In this special supplement, we consider the origins of ceramic, how it maintains its impressive longevity, its journey to becoming a tried and trusted material in a whole raft of different applications, and how today's designers, architects, manufacturers and artists continue to take it in new and exciting creative directions.

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**Below**  
Ceramic tiles in  
Turkish style





**It has influenced interiors for over 2,000 years. So what is behind the enduring appeal of ceramic, and what does the future hold for this most familiar of materials?**

# The power of ceramics

**Ceramics is one of the most ancient industries on Earth.** Once humans discovered that clay could be dug up and formed into objects by first mixing it with water and then firing in a kiln, the process was born. As early as 24000 BC, animal and human figurines were made from clay and other materials, before being fired in kilns partially dug into the ground.

Almost 10,000 years later, as settled communities were established, tiles were manufactured in Mesopotamia and India. The first use of functional pottery vessels for storing water and food is thought to be around 9000 or 10000 BC, while clay bricks were also made around the same time.

Glass was believed to be discovered in Egypt around 8000 BC, when overheating of kilns produced a coloured glaze on the pottery. It is estimated that it was not until 1500 BC that glass was produced independently of ceramics and fashioned into separate items.

Developments in the fledgling production of metal in the middle ages led to the next big change. Furnaces at that time for melting metal were constructed of natural materials, but when synthetic materials with better resistance to high temperatures – refractories – were developed in the 16<sup>th</sup> century, the seeds of the industrial revolution were sown. These refractories created the necessary conditions for melting metals and glass on an industrial scale, as well as for the manufacture of cement, chemicals and ceramics.

Another major development for ceramics took place in the second half of the 19<sup>th</sup> century, when ceramic materials for electrical insulation were developed. As other inventions emerged – including cars, radios, televisions, and computers – ceramic and glass materials were needed to help these new technologies to become a reality.

The ability of ceramic to withstand high temperatures has taken it to unimaginable

heights – not just as airplane engine components, but also as insulation for the now-retired NASA space shuttle, which was equipped with 31,000 ceramic tiles to protect it from the incredible heat when re-entering the Earth's atmosphere.

Far closer to home, ceramics have become an integral part of every household, from the tableware and sinks in our kitchen, to the sanitaryware in our bathrooms. Ceramic tiles have become a safe and dependable choice for a multitude of reasons. They don't burn or damage as easily as many other surface materials. They are anti-static – which is a reason why they are commonly used in sensitive industrial and healthcare environments – hygienic and easy to clean because the surface of ceramic tiles (glazed or unglazed) is very dense, giving microbes, mites and other micro-organisms very little chance of surviving when the surface is cleaned.

**Below**  
Traditional ceramic  
cooking containers



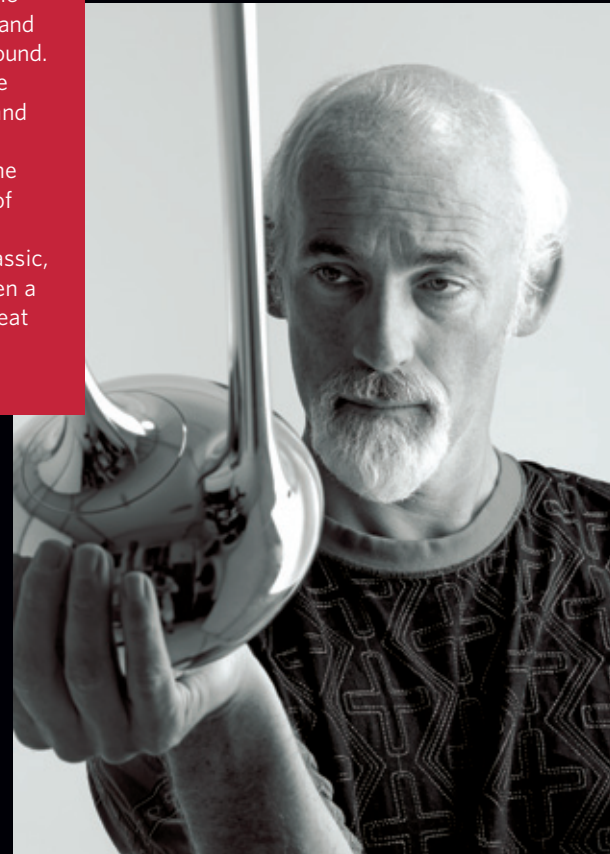
### MODERN WONDER

Something of a landmark moment for ceramic design in the home was Ross Lovegrove's Istanbul Collection, designed for Turkish brand VitrA. Launched in 2004, the design was inspired by the Turkish city that is home to the manufacturer's headquarters and which, for centuries has been a melting pot of cultures, traditions and ideas.

Before working on the project, the designer spent time in this city, immersing himself in the Turkish ceramic culture, drawing inspiration from the unique ethnicity and architecture that can be found there. He combined that with his own interpretation of water and organic form to create a collection that trod new ground.

At launch, this complete range comprised more than 120 products, such as bathtubs, basins, tiles and accessories, including an iconic floorstanding washbasin made from a single piece of ceramic. The range has been added to since, with new variants of some of these striking ceramic pieces.

Lovegrove said: 'Regarded now as a design classic, the Istanbul Collection reflects what happens when a creative mind responds to the provenance of a great historical culture and the artistic wealth of a remarkable city.'



**Clockwise from left**  
VitrA Istanbul floorstanding basin; designer Ross Lovegrove; Istanbul countertop washbasins



# Flying the flag for the 'Land of Ceramics'

***Bahadır Kayan, chairman of Turkishceramics, explains why Turkey remains at the forefront of ceramic production – and how the future looks brighter than ever for a product sector that continues to evolve...***

### **Please tell us a little about Turkishceramics and the Cement, Glass, Ceramics and Soil Products Exporters Association?**

Established in 1989, the Cement, Glass, Ceramics and Soil Products Exporters Association is the sole association in these sectors throughout Turkey. Today, the Association has more than 2,000 members and works to promote the sectors globally by raising awareness of the brands. Many activities are undertaken to communicate with a global audience, including participating in trade fairs and organising design competitions, hosting exhibitions and trade missions.

In addition, Turkishceramics was established in 1997 to raise awareness of Turkish ceramics internationally and communicate the quality of Turkish ceramic tiles and sanitaryware. The group has continued its activities with a long-term promotional strategy and great collaboration with its members from its inception until today.

### **What sets Turkish manufacturers apart from their global competitors? Do Turkish brands have particular key strengths in terms of quality, resources or manufacturing processes?**

Turkey has a history of ceramic production reaching back thousands of years, from the primitive sculpture of prehistoric Anatolia to the ornaments and crockery of the Hittites and the ornate hand-painted tiles of İznik. These traditions have been coloured by the many civilisations that have evolved in the Anatolian region. In addition to this cultural history, geography has played an important role. The abundance of natural resources in Anatolia ensures high-quality ceramic products. These raw materials are also exported for ceramic production outside Turkey. Because of this rich history and the quality of raw materials, Turkey can really be seen as the 'Land of Ceramics'.

Turkey also has some of the most sophisticated technology and innovative products on the market. Turkish ceramic producers work closely with some of the world's most talented designers to create exciting new products that are beautiful, durable and functional.

### **Turkishceramics represents a diverse range of manufacturers. What are the common interests and shared objectives that unite such companies and enable them to be promoted under the single Turkishceramics umbrella?**

Turkey is a leading country in the global ceramics industry, with an abundance of natural resources, high-quality ceramic products and innovative design methods. Turkish ceramic producers are proud to continue this tradition of innovation and creative approach to deliver a broad range of products for both professional and consumer markets.

Our collective mission as over 30 individual manufacturers and exporters – but as one organisation – is to raise the awareness of the quality and diversity of Turkish ceramics, sanitaryware and tiles abroad.

### **What are some of the key initiatives that Turkishceramics has undertaken to help convey the message about Turkish sanitaryware and tiles?**

Our mission is to explore initiatives that allow us to engage with the industry, the public and London's public realm in interesting and creative ways, often through reimagining the traditional use of ceramics and showcasing them as a dynamic, high-quality and innovative material. Public installations, such as Tile Mile in



### **BAHADIR KAYAN**

#### **Chairman, Turkishceramics**

Bahadır Kayan studied business administration at Bosphorus University, Istanbul, and received his MBA at the University of Economics and Business in Vienna.

He started his career at Ram Foreign Trade, and upon completion of his studies in Vienna in 1996, he joined Degussa Turkey as country manager for porcelain, glass, ceramics and metal industries. In 2002, he joined Kale Group as general manager. He has held a number of positions within the company, including export general manager, chief sales officer and chief marketing officer for Kale Group's building materials brands and markets. Kayan is currently leading Kale Group's property development business as general manager of Bodur Real Estate Development.

On behalf of the Cement, Glass, Ceramics and Soil Products Industries, Kayan – who speaks Turkish, English and German – has served three terms as vice president of the Exporters Association and is serving currently as president of the Cement, Glass, Ceramics and Soil Products Exporters Association. He has also led the Turkishceramics Promotion Group for four terms in a row.

2014, Unexpected Hill at the Royal Academy of Arts in 2015, and Gateways during designjunction last year, as well as being the main supporter of the Royal Academy's Architecture Programme, are about creative collaborations and knowledge exchange. They are a great way to foster relationships and increase communication between architects and designers in the UK and ceramic manufacturers in Turkey.

Collaborations with leading international designers have resulted in Turkish manufacturers producing some of the most innovative and forward-thinking ceramic products of recent years. This creative approach has resulted in numerous design awards and accolades, and coincides with Turkey being ranked as one of the top five ceramic tile and ceramic sanitaryware exporters of the world.

We are also delighted to announce our involvement with the Turkish Design Centre, which will be opening in London later this year.

### **What are some of the biggest global challenges facing ceramics manufacturers right now both globally, and – thinking about the UK market in particular – what impact is Brexit likely to have on prospects for Turkishceramics brands here?**

Turkey is a major trading partner with the UK, and Brexit won't change this. Negotiations for a new, improved trade deal are underway and may well make working with Britain outside of the EU more straightforward, but we have to wait for the outcomes of the negotiations to predict the true impacts. From the UK perspective, customers' needs don't change – they expect a consistent supply of well-designed, high-quality products.

### **What design trends are shaping the businesses of some of the Turkishceramics brands right now? Have changing consumer needs or preferences influenced the market in recent years, and if so, in what ways do you expect that to continue in the next few years?**

UK consumers are investing in their homes; home ownership in the UK is currently running at 63% of households. People are using their homes to generate monetary returns, and also to create lifestyle improvements. Kitchen and bathroom refurbishments, conservatories and attic extensions, and home office fit-outs are all enjoying massive growth in the UK. With regards to bathrooms, luxury is the key – lots of space, pairs of basins, products that can be wall-hung, double showers, and beautiful designs are perennially popular.

### **What does the future hold for the sector, both in terms of the global market for ceramic sanitaryware and tiles, and also for the Turkish market in particular? Will brands need to change the way they operate – either in terms of manufacturing or marketing, or both?**

The internet has changed people's access to information and allowed consumers to become more educated about the number and quality of products on the market. It is becoming increasingly important for us to focus on the way we communicate with customers online to ensure they are selecting products which enhance their lives. To continue setting ourselves apart from competition throughout the world, Turkishceramics, and the companies we represent, will continue to collaborate with designers, deliver sustainable products and focus on providing quality service to our customers.



TURKEY'S CERAMIC (TILE+SANITARY WARE) SECTOR EXPORT MEASURES BY COUNTRY(2016-2017 JANUARY-DECEMBER PERIOD)								
COUNTRY	2016			2017			(%) CHANGE	
	QUANTITY (Kg)	VALUE (\$)	\$/TONNE	QUANTITY (Kg)	VALUE (\$)	\$/TONNE	QUANTITY	VALUE
GERMANY	210,796,387	136,202,052	646	210,914,275	134,359,678	637	0.1	-1.4
UNITED KINGDOM	161,753,252	83,636,634	517	177,826,933	86,668,645	487	9.9	3.6
UNITED STATES	197,308,739	77,608,758	393	234,887,159	86,583,248	369	19.0	11.6
ISRAEL	196,906,159	65,026,078	330	220,601,481	71,613,799	325	12.0	10.1
FRANCE	83,423,045	50,323,830	603	101,768,589	60,030,461	590	22.0	19.3
CANADA	124,278,946	40,864,944	329	145,660,834	43,231,586	297	17.2	5.8
ITALY	42,835,530	32,278,225	754	38,825,760	33,657,406	867	-9.4	4.3
SAUDI ARABIA	34,177,202	19,164,417	561	40,765,688	28,914,321	709	19.3	50.9
NETHERLANDS	36,250,652	22,393,762	618	42,267,634	24,069,132	569	16.6	7.5
ROMANIA	61,867,875	21,414,718	346	65,425,609	22,864,434	349	5.8	6.8
SWEDISH	24,541,501	18,379,203	749	27,014,123	20,334,988	753	10.1	10.6
BELGIUM	31,378,067	14,258,100	454	44,283,552	19,373,475	437	41.1	35.9
IRAQ	39,708,038	24,101,564	607	33,428,559	19,097,858	571	-15.8	-20.8
GREECE	36,432,046	14,711,442	404	45,616,067	18,138,847	398	25.2	23.3
UNITED ARAB EMIRATES	17,444,241	12,322,554	706	27,379,635	15,969,321	583	57.0	29.6
TURKISH REPUBLIC OF NORTHERN CYPRUS	30,948,577	11,762,611	380	46,363,304	15,067,547	325	49.8	28.1
AZERBAIJAN	17,976,514	12,254,696	682	23,251,092	14,739,796	634	29.3	20.3
IRAN	19,156,637	14,696,874	767	22,328,464	14,611,596	654	16.6	-0.6
ALGERIA	14,299,990	9,115,838	637	18,346,466	14,188,752	773	28.3	55.6
GEORGIA	27,836,719	13,324,573	479	29,408,300	13,975,448	475	5.6	4.9
OTHERS	405,106,504	251,811,947	622	459,270,932	278,167,001	606	13.4	10.5
TOTAL	1,814,426,621	945,652,819	521	2,055,634,456	1,035,657,341	504	13.3	9.5

Source: All Exporter Associations Database

# Global presence

**Turkishceramics is an umbrella organisation representing over 30 individual ceramic manufacturers and exporters in Turkey.** The group’s main mission is to raise awareness and communicate the quality of Turkish ceramics and sanitary ware internationally.

Ceramic production in Turkey has a long and rich history dating back thousands of years, with the first ceramics being created in Anatolia over 8,000 years ago. Since that time the sector has grown to become one of the country’s biggest trade industries with long term growth in both manufacturing and exports. In 2017 the value of Turkey’s global tile exports saw an increase of almost eight per cent from the previous year, while sanitary ware experienced a growth of over nine per cent.

As a major supporter of architecture and design in the UK and internationally, Turkishceramics aims to serve as a cultural ambassador and to foster creative collaboration and learning between countries. The group undertakes many activities to communicate to a global audience, from participating in trade

fairs and organising design competitions, to hosting exhibitions and trade missions.

Among the organisation’s many activities throughout the year are its starring roles at some of the industry’s key events and exhibitions, this includes Cersaie in Bologna, the World of Architecture Festival, and MIPIM in Cannes. As a way to engage with the public, the industry and London’s public realm, the organisation has initiated numerous public installations in collaboration with top designers, including Gateways in Kings Cross, Unexpected Hill at the Royal Academy, and Tile Mile in Clerkenwell. Initiating installations like these allows the brand to re-imagine the traditional use of ceramics and showcase them as a dynamic, high-quality and innovative material.

This year will be Turkishceramics’ fourth continuous year as the lead supporter of the Royal Academy of Arts’ Architecture Programme and, in celebration of the institution’s transformative redevelopment for its 250th anniversary, they are also a sponsor of the Renzo Piano exhibition. [turkishceramics.com](http://turkishceramics.com)

1



Isvea has wide range of sanitary ware for residential and contract applications.

1. Isvea Colorisvea metalik

2. Isvea Colorisvea metalik

3. Isvea Azur

4. Isvea Cappitone

2



3



4





# Exploring New Horizons

Turkishceramics partnered with designer Adam Nathaniel Furman to create a striking ceramic feature at designjunction during September’s London Design Week. We spoke to *Furman* about the project and the creative opportunities brought about through working with ceramic...

**What attracted you to this project?**  
I adore ceramics and have been very keen to use them at an architectural scale for some time now, and being able to do this in a public space, in such a prominent location - particularly one I am so close to as a North Londoner and a tutor at Central St Martins - was extremely exciting.

**Why is ceramics such a timeless and constantly relevant material?**  
It is the most elementary material you can imagine, mud heated with fire. From the dawn of civilisation we have fashioned the world around us using it, so the history of ceramics is literally the history of humanity. From the very first handmade brick and pot, right through to the precision engineered ceramics on spacecraft, in jet engines, and the latest 3D printed architectural experiments, this amazing material has managed to consistently be at once the most immemorially ancient, and shockingly advanced and novel element in our built environment.

**How is each gate different and what did you hope the cumulative effect of them will be?**  
They are united in their simple and bold geometries, but each gives the impression of a different aesthetic, a different place and era. The classic gate is handmade in the timeless Iznik tradition of Turkish Ceramics, and tells the story of Paradise, of the abundance and beauty of nature. The wood and stone gate speaks of traditional architectural materials, but plays with them in their new, and increasingly popular, ceramic form. The Retro gate uses high durability tiles of the kind perfect for public spaces, echoing the hues and forms of the funky seventies, while the Metro Gate uses black and white bevelled tiles that are inspired by the utilitarian spaces of Edwardian architecture.

Each is distinct, but I am keen that together they create a fun and pleasurable sequence that will intrigue passers-by, and make people think again about how everyday ceramics can be deployed in ways and in places they would not normally expect - the way they used to be used in buildings all over the country until the mid-20th Century - generating delightful results.

**What did you want visitors to take away from the experience of walking through the gates?**  
That a sense of history, monumentality, technology and colour can all be experienced in the most direct and simple of ways through the joy of ceramics.



ALL PHOTOS MARK COCKSEGE

**GATEWAYS AT DESIGNJUNCTION**  
Gateways, an installation consisting of four ceramic tiled gates, each 4m in height, occupied the central fountain space on Granary Square, King’s Cross, for designjunction during the most recent London Design Festival. As one of the main partners of the show, Turkishceramics collaborated with London-based designer Adam Nathaniel Furman to work on the temporary, site-specific installation featuring contemporary ceramic tiles from Turkey.

Designed for one of London’s most iconic public spaces, Gateways was made up of four bold and colourful gates that drew visitors to wander through and experience the rich history of ceramics in Turkey. Each gate was distinct, encompassing a different design story in a vibrant and contemporary language, ranging from the artisanal handcrafted ceramics of the Ottoman Empire to the innovative products of today.

The front gate was covered in hand-painted tiles that referenced the timeless İznik tradition of Turkish ceramics, telling the story of paradise. The second structure, the Wood & Stone gate, spoke of traditional architectural materials, while playing with them in their new and increasingly popular ceramic form. The Retro Gate used high durability tiles of the kind perfect for active public spaces, echoing the hues and forms of the funky Seventies. The forth structure - the Metro Gate - featured black-and-white bevelled tiles, inspired by the utilitarian spaces of Edwardian architecture.

Designer Adam Nathaniel Furman said: ‘From the Ishtar Gate of Babylon, the Safavid facades of Isfahan’s Naqsh-e Jahan Square, and Sinan’s divine Ottoman mosques, to the Majolica Cloister of Santa Chiara in Naples, the gothic terracotta of the soaring Woolworth Building in New York, and the famous red glazed underground stations of London, ceramics have always been, and continue to be, both the most historic, resonant and traditional, as well as the most fresh, perpetually surprising, delightful and exciting of architectural materials. There is no other architectural treatment that has remained as fresh, relevant and cool as ceramics has from 1000 BC right through into the 21<sup>st</sup> century.’



**Above**  
Gateways at Granary Square, in London’s King’s Cross, during London Design Festival in 2017





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2



3



PHOTO ENGIN GERCEK STUDIO

**1.** The Babel sanitaryware range from Kale includes basins, WCs and bathtubs in an extensive choice of configurations

**2.** Kale's Smartedge basin collection features a super-slim outer edge and is available in round, oval and square versions

**3.** Deloitte's Istanbul headquarters featuring Kale sanitary products

**4.** Rectangular bowl washbasin (60cm x 40cm) from Kale's Zero range

4



**1.** Helios is a washbasin with a distinctive form and which can be configured in a range of different ways, including countertop, built-in and semi-pedestal options. They feature Serel EasyWash technology which activates after the user has moved away and flushes away any remaining dirt within the basin

**2.** Serel's Poseidon range have been designed with a number of innovations to maximise hygiene. The washbasins feature Serel Hygiene+ surface technology to create a super-smooth surface and reduce the potential for dirt or stains to stick to the surface. The same surface coating is used within the toilet bowl, along with a design which maximises cleaning efficiency and removes the problem of splashing during the flush

1



2





## NEW ARRIVAL

Turner Prize-winning architecture collective Assemble and artist Matthew Raw have revealed Clay Station, a commission for Art on the Underground, Transport for London's public art programme, at Seven Sisters Underground Station.

Clay Station is the refurbishment and remodelling of a commercial unit at the entrance to the station, which has lain empty for more than a decade. Building on London Underground's rich heritage of ceramics, the project involved the production of more than 1,000 hand-made tiles. The project celebrates the diversity of design across London Underground, including countless different tile designs that are found across the network. It also aims to challenge building practice, which is commonly taking place in the city, placing focus on care, craft and the creation of something joyful.

While the space was under construction, it was equipped with a kiln to allow for production of the tiles on site. The technique used entails colouring blocks of plain white clay with body stain and mixing together different combinations before they are sized, rolled, moulded, cut, dried,

fired and glazed. The resulting tiles formed from this process clad the exterior of the building, each one with a unique design.

Matthew Raw said: 'The colourful approach we decided upon came from an extended period of experimentation in the studio. As a result, each tile is a bespoke composition of different clay mixtures. It has been great to work with Assemble and bounce off different skill sets. During production it quickly became apparent that cladding the kiosk with this approach was going to be a labour of love, as each element is rolled and then glazed by hand.'

In collaboration with A New Direction and Create Jobs, Art on the Underground also established two traineeships as part of the project that provided the opportunity for trainees to take part in clay induction training, followed by hands-on making experience with artist Matthew Raw and members of Assemble. This initiative was funded by Arts Council England.

The North London location was selected for the project as it was felt that the station entrance would benefit from some improvement – restoring a feeling of warmth towards the station among the community and as part of the regeneration

in the surrounding area.

On their commission for Art on the Underground, Assemble said: 'Our collaboration with Matthew Raw for this Art on the Underground commission has been a great opportunity to experiment with architectural ceramics techniques and designs, something which has a rich history when it comes to the space of the underground. We were interested in the impact that a small corner building could have, if it was brought back into use after having lain empty for 10 years and was treated with an extraordinary amount of care.'

Eleanor Pinfield, head of Art on the Underground added: 'With this new commission at Seven Sisters Underground Station, we engaged with the community to restore a sense of conviviality in the area, supported by developing new skills through workshops for local residents. It is also an opportunity to enrich passengers' journeys by focusing on a different type of building design to what they might see in their everyday commute.'

Clay Station opened permanently to the public at Seven Sisters Underground Station in December 2017.



**From left**  
Before and after: the commercial unit at the entrance to the Seven Sisters Underground Station was completely transformed



## THROWING LIGHT ON TRADITIONAL SKILLS

This project for Rome Central Market by architect Luca Baldini and designer Marco Baldini of studio q-bic in Florence, is based on the idea of the market as a place for spontaneous business meetings, a changeable space in which the experience and the knowledge of a community are expressed.

The team's intention was to create a single unified space, while allowing for the unique character of each individual shop through the use of different materials, such as wood, iron, ceramics and marble.

The shops and its craftsmen are the real protagonists, the heart of the space, and the unique lighting for each area ensures that their individual skills are illuminated under the market's single roof.

Matteo Ugolini, art director at lighting brand Karman, said: 'From the very beginning, ceramic has been a key material for Karman. It represents the origin, the archetype, the raw and first material leading us directly to the origins, to the myth of our culture. The beauty of that material lays in its raw or glossy finish, used very often by Karman for its products.'



**Clockwise from left**  
Matteo Ugolini-designed Dejavu Nu white-paste pendant lamp at Rome Central Market; Scrivimi ceramic pendant lamp by Ugolini





# A life ceramic

**Industrial designer Robin Levien explains how the challenges and rewards of working with the material has led to half a century of creativity and discovery...**

**I discovered ceramics as a 15-year-old schoolboy, so my last birthday was a 50-year ceramics milestone.** My first ceramic work was a seated Buddha, about 30cm tall. The art master did say: 'Isn't that a bit ambitious, Levien?' when he saw my drawing. When the kiln door was opened, my Buddha sat resplendent in among the ruins of the other children's pots. They hadn't dried their pieces out properly. That was it for me, the moment I got hooked on ceramics and I have thought about ceramics most days since. There was an early warning about the difficulties of working with ceramics even then because the foot had broken off my Buddha in the firing. I am often heard saying that having a masochistic streak helps if you

are going to work with ceramic because it never does exactly what you want it to do.

From school to graduating from the Royal College of Art in 1976, I spent most of my time making ceramics. Those 10 years or so of handling and getting to know the material have stood me in good stead during my design career – in particular, the 35 years I have spent designing bathroom ceramics for Ideal Standard and Armitage Shanks.

All WC bowls and many basins are made from vitreous china. They need to be non-porous, so they are very high fired. Even with finite element analysis software to predict the distortion during the firing of vitreous china sanitaryware, there is still an element of black art. At the top temperature during the firing

the ceramic is in a plastic state: if you could poke it with a stick, it would collapse.

The area under the tank on a close-coupled WC bowl is always raised up by as much as 30mm or 40mm and drops to horizontal during the firing.

Casting ceramic bathroom products with liquid clay in porous moulds has not fundamentally changed over the past 150 years or so. The most significant innovation has been high-pressure casting, where the liquid clay is pumped into the mould and the casting time reduced to minutes. While bringing more control to the process and improving quality, this has created limitations for the designer as there are no opportunities to create undercuts. Think back to old washbasin designs with an eyebrow over

**Right**  
Designer Robert Levien's love of ceramics started with making a 30cm seated Buddha at school



## ROBIN LEVIEN

Robin Levien has worked with sanitaryware brand Ideal Standard since the early 1980s. He is responsible for the design of around 15% or all bathroom products sold in the UK, with one in seven UK homes having one of his designs in the bathroom. He studied ceramics at the Central School of Art and Design and the Royal College of Art, graduating with a master's degree in 1976. He set up his current practice Studio Levien in 1999, designing a wide variety of products for international markets. He has won numerous awards for his work, including a Special Commendation in the Prince Philip Designers Prize, and numerous examples of his work are in the permanent collection of the Victoria and Albert Museum in London.



**This image**  
Ideal Standard's Concept Freedom bathroom range, designed by Robert Levien

## THE MANUFACTURING CHALLENGE

'It was back in the early 1990s that we were asked to make a design proposal for a mid-market bathroom range for Ideal Standard. A key element of our proposal was that there should be a lightness to the back where the basin meets the wall.

The design was liked and a mould was built, but we were very disappointed to see that in the firing the basin had collapsed. The engineers said they thought we would have to add 60mm to the width of the tap deck for it to support the basin. We said that was too big a change, so they agreed to add 20mm.

A new mould was built and a sample fired, the basin collapsed again, although not quite so far. Another mould was built with 40mm added to the width. The basin collapsed again, so finally a fourth mould was built with 60mm added to the deck width and – lo and behold – the basin held up.

The design was launched, but it wasn't successful. It had lost its magic, but the project is a testimony to Ideal Standard's willingness to try and achieve a designer's aspirations, and to the difficulties of working with vitreous china.'

the overflow hole – that's not possible with a two-part, high-pressure casting mould.

Robotics has played its part in production too, at Armitage Shanks they are making WC bowls virtually untouched by human hand.

I don't see a serious challenge to ceramics as the best material to make sanitaryware in the near future. There are not many materials that can look as good as new after a decade of daily use. There have been high-strength ceramic bodies developed recently to make the super-

thin washbasins that are currently in fashion but for innovation in ceramic materials, it is the tile industry that leads the way. Very little finite element analysis is required to predict the distortion of a flat tile. Glaze can run on a three-dimensional form – another problem the tile industry doesn't face.

Tiles are now being made in a bewildering range of shapes and sizes, some as big as a door. The decorative treatments are bewildering too. Who would have predicted ceramic tiles almost

indistinguishable from wood? What has sustained my lifelong love of ceramics is that you can never make it do exactly what you want, it is never perfect – perhaps a blessing that I learnt that very early when the foot broke off my Buddha. It is the imperfection that brings a human quality to ceramics. I am a perfectionist trying to master the art of imperfection and designing ceramics will see me out.

*studiolevien.com*



# All about the detail

**Istanbul-based Sema Topaloğlu is a designer who produces bespoke details, collectible objects and furniture for interiors. Featuring her personal vocabulary of geometric patterns and shape, her practice is known for its dedication to materials, craftsmanship and handcrafted environment. She was recently listed as a 'Name to Watch' in the Wallpaper Design Awards**



## **What are the challenges and advantages in working with ceramic?**

Ceramic moulding is one of the world's oldest professions. While it is possible to work with clay by hand in the comfort of your own home, professional factory environments allow mass production. Given my strong interest in materials, the challenges lie in finding another point of view within the creative process. In spite of the rapid industrialisation, it is key to preserve and pass on the craftsman-designer relationship to future generations.

## **How does the long heritage of ceramic use in tiles inform and influence their design today?**

The relationship between craftsman and designer provides us with the perfect combination of simplicity and postmodern design language. Today, tiled stoves and Turkish baths decorated with tiles are the most nostalgic cultural treasures. With the demise of mass production, unfortunately the detailing and craftsmanship has often been compromised. However, there is a positive change in the market and demand for more bespoke work, which we can see in architecture nowadays.

## **How has production/manufacturing technology changed what is possible with the material?**

High-tech machines and today's advanced moulding techniques make the design process quicker and more predictable, meaning products are more cost-effective and accessible. Production and manufacturing technology allows sustainability and innovation in large-scale architectural projects.

## **What are some of the main ways in which the design process differs when working with ceramic compared with other types of material?**

Ceramic moulding is one of the world's oldest and most common professions. You might see an individual learning ceramics or a young industrial designer working with it for their first-year project.

Ceramic is very flexible and cost-effective. You can have a hand-painted tile or an object, but at the same time you can buy a ceramic cup from a shop for a much cheaper price. The same applies to building materials.

## **What does the future hold for ceramic use? Are there potential new directions to explore?**

Ceramic is a highly innovative and creative material. It is also a platform for communicating different cultural patterns and design language. I believe that ceramic has created endless opportunities for the design and architecture world. We are now seeing bending ceramic tiles and 3D printed surfaces that showcase the material's adaptability.

*sematopaloglu.com*

**Left**  
Sema Topaloğlu at work



## Turkish Design Centre Opening Spring 2018 26 St Cross Street, Clerkenwell

Turkishceramics represents over 30 individual ceramic and sanitaryware manufacturers and exporters in Turkey. This Spring we celebrate the first ceramics created in Anatolia over 8,000 years ago with the opening of the Turkish Design Centre in London.

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