Crystal world

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Curator:
Gill Perry

Cover image: Ackroyd and Harvey, *Crystal Fish*, 2005, alum sulphate.

This exhibition is dedicated to the memory
of Professor Samuel Victor Perry FRS

Introduction

Crystal World is an exhibition which explores modern artists' fascination with crystals. While they are important substances in many scientific disciplines, including chemistry, biochemistry, molecular biology, environmental science and physics, their powerful visual presence and metaphorical associations have also intrigued artists and philosophers over many centuries. Many artists have been attracted to their transformative possibilities, positioned somewhere between the organic and the inorganic. Crystals have been incorporated physically into art works, and have been used to suggest symbolic meanings around themes of transformation, self-generation, or the spaces between life and death. Although a crystal appears 'lifeless' or dead, it can also suggest life; it has grown from a solution or compound. The artists in this exhibition have been inspired in different ways by these complex, transient chemical processes, and by their many aesthetic possibilities.

The Oxford English Dictionary provides a definition of 'crystal' dating from the seventeenth century, as "a form in which molecules regularly aggregate by the operation of molecular affinity: it has a definite internal structure, with the external form of a solid enclosed by a number of symmetrically arranged plane faces." This definition of molecular activity is echoed and refined in the modern *Oxford Dictionary of Biochemistry and Molecular Biology* which describes "a solid of regular shape and, for a given compound, characteristic angles, formed when an element or compound solidifies slowly enough, as a result either of freezing from the liquid form or of precipitating out of solution, to allow the individual molecules to take up regular positions with respect to one another." Both scientific definitions describe the complex molecular activity, the jostling and intersections of planes and surfaces, which take place when a crystal is formed.

The works in this show reveal a fascination with those processes, but harnessed to some other visual or sculptural projects. Crystals have been used to evoke many aesthetic, poetic and philosophical meanings. In a powerful literary image of the theme, J.G. Ballard's *The Crystal World* of 1966, describes the mysterious crystallisation of a West African jungle. As trees and creatures metamorphose into glittering jewels, the inhabitants are both terrified and bedazzled. The remarkable capacity for crystals to both bedazzle and bewilder is another theme explored in different ways by the artists in this exhibition.

The British artists Heather Ackroyd and Dan Harvey have been working with crystals since 1994. They often work with natural materials and are intrigued by the effects of erosion and decay, natural processes which are echoed or accentuated in their many uses of crystallisation and its transformative potential. Fish and animal skeletons found washed up or decomposing in nature are metamorphosed into glittering, seductive objects seemingly fit for more celestial surroundings (page 6-7). In *Stranded* of 2005 (page 7, figure1) they stripped the flesh off a washed-up minke whale on the beach at Skegness, and submerged the bones into vats of supersaturated chemical solution. The skeleton was then reassembled in the Natural History Museum, creating a sparkling, ribbed frame of white crystals, a tribute to the fragility of the eco-system of the sea and some of its endangered species. Their much smaller *Crystal Fish* of the same year sits horizontally in a protective plexiglass case, like a stuffed fishing trophy (page 6, figure 2). But this floating fish is exquisitely fragile; the slightest movement causes its alum crystals to fall, revealing the tiny branches of its fine bones.

Without hectoring their audiences, Ackroyd and Harvey exploit the seductive and symbolic possibilities of crystallisation to discretely reference environmental concerns and their anxieties about climate change and the acidification of the ocean. These fragile objects resonate with metaphorical references to loss (of our environment) and the transience (of nature and our eco-system). The complex molecular systems of the different crystals employed in their work, echo the minute molecular complexity of natural resources such as plankton and carbonate shells, whose delicate balance in the ocean is threatened by pollution and our ever increasing use of fossil fuels. These lifeless, gleaming crystallised skeletons can both seduce and disturb at the same time.

Copper sulphate, or $CuSO_4$, is one of the most compelling of crystals; growing deep blue crystals from solution is one of the memorable highlights of school chemistry lessons. Ackroyd and Harvey took this lesson beyond the school chemistry lab when they used copper sulphate in one of their haunting earlier works, *Crystal Bust*, 1994 (page 10, figure 5). *Crystal Bust* references the tradition of sculpted pseudo-classical busts of eminent political or cultural figures, a tradition well represented within the hallowed walls of the Royal Society in London. Made from a body cast of one half of the artist partnership, Dan Harvey, the blue corporeal form of the *Crystal Bust* is profoundly unsettling, like a death mask. From the front, the blueness suggests a macabre sickness or, perhaps, a visual pun on the idea of 'blue blood' which is more often associated with carved portrait busts. But from behind, the visible wire armature and sharp, interconnecting crystalline shapes appear more like a densely variegated abstract sculpture, overwhelmed by the rich blue of the copper sulphate.

A series of delicate drawings by British artist Michelle Charles reveals a fascination with the elusive chemical processes that produce one of the most common forms of crystal in everyday use. Her *Growing Crystals out of Salt* of 2011 (page 12, figure 7) depicts a bundle of salt crystals grown on a string (originally hung from a pencil placed across a jam jar). The puzzling white forms of the salt crystal are accentuated by the background of a large, brown disgarded envelope, while their identity as crystals is confirmed by the barely legible pencil notations. Charles emphasises the transitory nature of such artistic processes in which forms are glimpsed or captured in their transience, rather than worked up over time. This gives her drawings a light, almost indecipherable quality, like imprints. She is drawn to processes of evaporation and to the sheer simplicity of the experiment, which actually masks a complex chemical transformation. That transformation produces intricate molecular clusters which, as she points out, are "impossible to see with the human eye. We need a microscope to see them properly"[1]. Charles's work then offers glimpses of the invisible, providing traces and subtle clues of a seemingly magical scientific process.

The French artist Hubert Duprat is fascinated by the visual potential of materials which he encounters in scientific literature, and he has been drawn to the disciplines of mineralogy, petrology, entomology and archaeology in seeking out sources for his sculptural works. He celebrates and manipulates the forms and textures of many materials, both natural and industrial. Crystals are often employed for their geometric order, their illusionistic potential and their capacity to inspire curiosity. His cylindrical assemblage of tiny blocks of calcite, a crystal known as Iceland spa, (*Calcite*, 2008) glistens magisterially on its plinth (page 12, figure 8). The ice-like forms of the calcite reflect and refract the light, thwarting the viewer's attempts to understand its inner structure. Such projects can inspire curiosity and bewildered fascination; the viewer is constantly challenged to understand exactly how the artist created this crystalline illusion. Duprat does not seek to display the raw beauty of his materials, but rather their potential for visual manipulation. His *Sans titre* of 2011 (page 14, figure 9) uses transparent stones of the crystal ulexite, which seem to deny their own thickness by reflecting a clear image of any object placed on their surface. The reflections of a dice appear to be grown inside the crystals, a deceptive image which can bewilder the viewer. Duprat has carefully selected only ulexite crystals with perfect geometric shapes, much like dice, contributing to the illusion of an industrially produced object. Duprat has been described as both "naturalist and counterfeiter"[2], a description that might also be applied (with different emphases) to the other artists in this show. Their various explorations of real and imaginary crystals remind us that imagination need not be the enemy of reason, and that there can be porous boundaries between art and science.

Gill Perry
2011

[1] Conversation with the artist, May, 2011.
[2] Guillaume Desanges, in *Hubert Duprat: Caddis, Crystal and Company*, Norfolk Museums and Archeology Press, 2011, p.39.

Revenge of the crystal

> “The crystal is expression.... What we see in the crystal is always the bursting forth of life, of time, in its dividing in two or differentiation.”

Gilles Deleuze, *Cinema 2: The Time-Image* (1985)

Among the more fantastic emanations of the nineteenth century obsession with crystals – schooled on new discoveries in geology as well as the analogous bristling wonders of glass architecture – is a curious novella published by George Sand in 1864. *Laura: A Journey into the Crystal* is narrated by one Alexis Hartz, a young man who falls in love with his cousin while working in a small geological museum. A strange confusion arises in his mind between his desire for Laura and his fascination with the museum’s crystalline exhibits, so that he falls several times into reveries in which she leads him through the interior of a geode. He discovers a startlingly beautiful world, in which the sun, a “blazing diamond”, shines on opal oceans and islands of turquoise, while waterfalls and lakes seem turned to glass. Following an even more ornate vision in which he is led into the very interior of the earth, Alexis comes to his senses and, with a new-found realism, marries his cousin.

Sand’s bizarre tale dramatizes the abiding fascination of crystals for the artistic mind. Laura was published in the same year as Jules Verne’s more celebrated *Journey to the Centre of the Earth*, a book that similarly imagines a chthonic world decorated and illumined by “crystals of opaque quartz, set with limpid tears of glass, and hanging like clustered chandeliers from the vaulted roof”. The fanciful notion of a hollow earth matters less than the vision of the crystals themselves, because what both books express most clearly is a concern with the precise meeting point between art and science. The literary imagination finds in the crystal a source of wonder and estrangement at the exact moment that it is also the object of popular scientific interest: the ramifying grotesqueries of mineral forms were as intriguing to the Victorian public as the aquatic creatures they kept in aquariums or the exotic plants that flourished in fern houses and winter gardens. In fact, these last overlap in what we might call the ‘crystal mind’ – one of the fascinations of Joseph Paxton’s Crystal Palace was its combination of technological daring and mystical beauty, the catalogue of the Great Exhibition in 1852 claiming it was “the only building in the world in which the atmosphere [was] perceptible”.

Crystals thus provided both an image of nature’s own powers as artificer and a mineral aesthetic toward which art, literature and architecture might strive. More than this, they embodied two competing creative ambitions: toward formal perfection and rigorous but unpredictable becoming. John Ruskin expressed the first goal in *The Ethics of the Dust* (1866), reflecting on the base, filthy and slimy matter out of which mineral beauty nonetheless arises: “there seems to be a continual effort to raise itself into a higher state; and a measured gain, through the fierce revulsion and slow renewal of the earth’s frame, in beauty, and order, and permanence.” Something of this aesthetic (and inhuman) purity carries over into the real and imagined transparent architecture of the Modernist period: the glass house that Sergei Eisenstein imagined as the setting for an unmade film, or the achieved glass towers of Mies van der Rohe. In the same period however, crystals appeared to the Surrealist imagination as monstrous or grotesque ruins – Brassaï photographed an arrangement of crystals that looked like a bombed city and titled it *The House Where I Live*.

In the second half of the twentieth century, the crystal functioned for certain artists and writers as a model for processes as much of collapse as growth or purification. In J. G. Ballard’s 1966 novel *The Crystal World*, a west African jungle, and everything living within it, is being slowly petrified, nature falling into ruin at the same time as it acquires a new type of aesthetic (if also horrifying) life. Ballard’s novel is one avowed influence on Robert Smithson, the post-war artist whose work and writings best exemplify the material and metaphoric potential of the crystal. In an essay entitled *The Crystal Land* (1969), Smithson writes of visiting a quarry in his native New Jersey: “It was an arid region, bleached and dry. An infinity of surfaces spread in every direction. A chaos of

cracks surrounded us." The crystal is Smithson's favoured image for a paradoxical combination of processes he sees at work in the New Jersey landscape, with its concrete infrastructure and glass architecture that seems to be coming into being and falling into ruin at the same time.

It is this sense of the crystalline as both ruined, or fractured, and at the same time endlessly proliferating that contemporary artists have responded to in recent years, seeing it too as necessarily emanating from the most distant geological past and an unknowable future. Roger Hiorns' *Seizure* (2008) (pages 14 – 15, figure 10) is a case in point – a council flat in a small Modernist complex in London became, after its flooding with a copper sulphate solution, a magical space that might have emerged from Victorian fantasies of an underground world or from a science-fiction future. If the contemporary crystalline imagination is transfixed by images of nature's (almost kitsch) opulence and strangeness, as in the work of Hubert Duprat, it is also, in for example the encrusted beings created by Ackroyd and Harvey, fascinated by environmental change, decay and disaster. Crystals today continue, just as they did for Verne and Sand, to summon vast tracts of time and space, and leave us to wonder at our place in the world they compose and enrich.

Brian Dillon
2011

About the authors

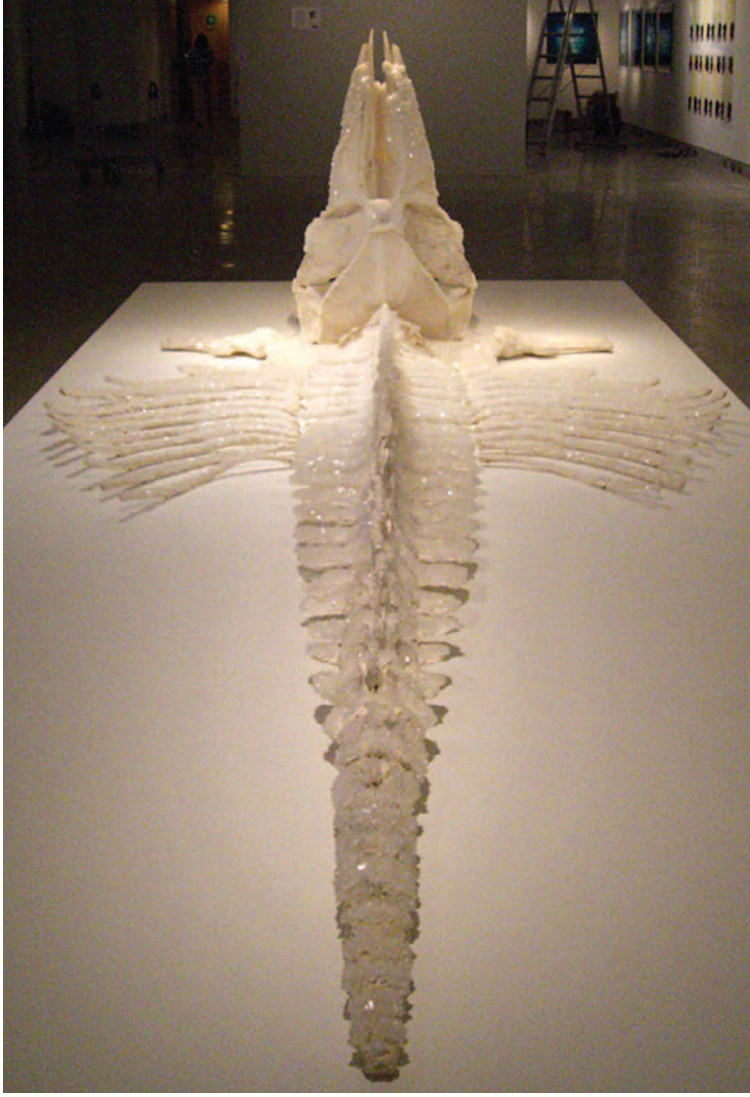
Gill Perry is Professor of Art History at the Open University. She has published books, articles and catalogues on modern and contemporary art, including *Themes in Contemporary Art*, ed, (Yale University Press, 2004); *Difference and Excess in Contemporary Art*, ed. (Blackwells, 2003); *Gender and Art*, ed. (Yale University Press, 1999); *Women Artists and the Parisian Avant-Garde* (Manchester University Press, 1995). Her forthcoming book is titled, *Playing at Home: The House in Contemporary Art*.

Brian Dillon is a writer and critic based in Canterbury. He is the author of *Sanctuary* (Sternberg Press, 2011), *Tormented Hope: Nine Hypochondriac Lives* (Penguin, 2009) and *In the Dark Room* (Penguin, 2005). He is UK editor of *Cabinet* magazine and writes regularly for the *Guardian*, the *London Review of Books*, *frieze* and *Artforum*.

1. (Far right)
Ackroyd and Harvey, *Stranded*, 2005
Minke whale bone and alum sulphate.

2. (Below)
Ackroyd and Harvey, *Crystal Fish*, 2005
Alum sulphate.
(86cm x 31cm x 19cm)

3. (Right)
Ackroyd and Harvey,
***Cauldron of Change*,** 1994
Ferrous sulphate.
(35cm x 35cm x 18cm)



4a. (Left)

Ackroyd and Harvey, *Pony Skull*, 1997
Tinted alum crystal.
(52cm x 31cm x 16cm)
Collection of Sir Robert and Lisa Sainsbury.

4b. (Above)

Ackroyd and Harvey, *Pony Skull*, 1997
Ferrous sulphate.
(42cm x 19cm x 14cm)

4c. (Below)

Ackroyd and Harvey, *Pony Skull,* 1997
Plaster mould casing.
(57cm x 28cm x 17cm)

5. (Left and far left)

Ackroyd and Harvey, *Crystal Bust*, 1994

Copper sulphate.

(60cm x 56cm x 28cm)

Collection of Sir Robert and Lisa Sainsbury.

6. (Below)

Ackroyd and Harvey, *Ice Lens*, 2005

Carved from glacial ice.

(1m x 0.8m x 0.35m)

Frozen fjord, Svalbard

Cape Farewell expedition 2005.

7. (Right)

Michelle Charles, *Growing Crystals out of Salt,* 2011

Pencil and water-based paint.
(31.5cm x 22.5cm)

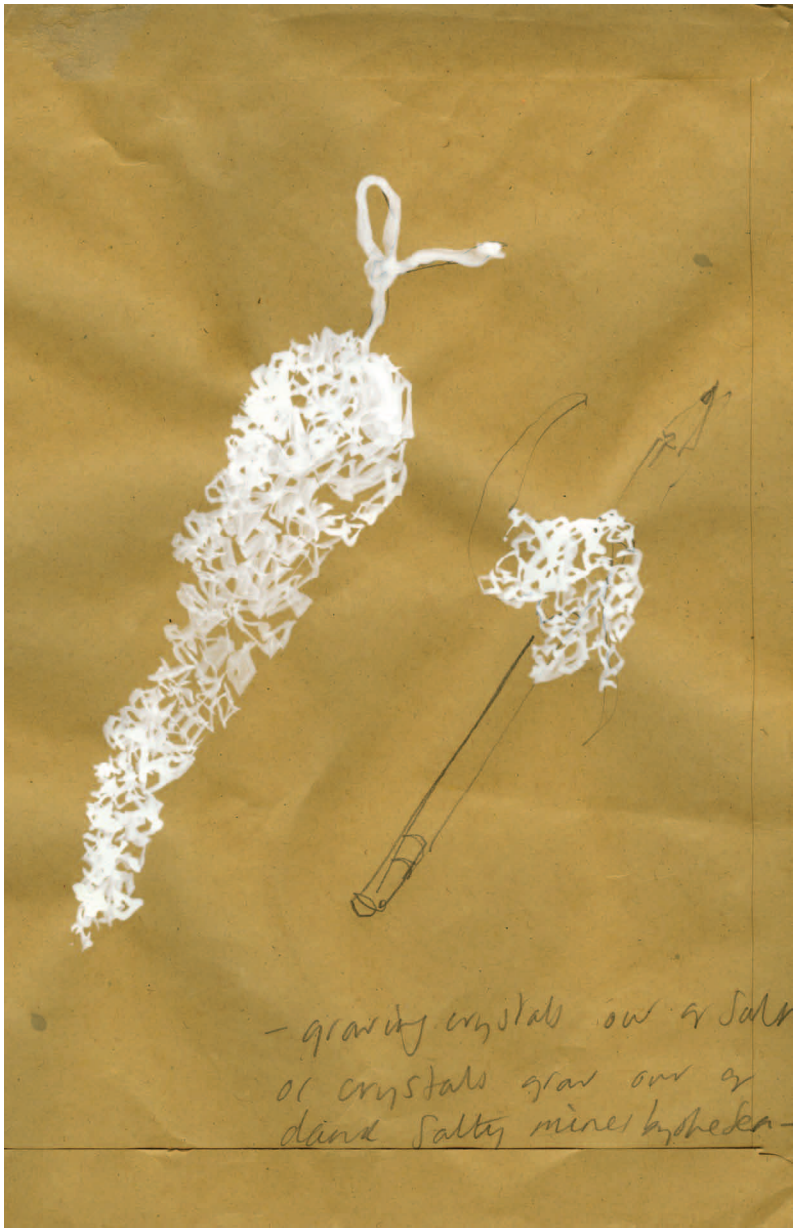
8. (Detail far right and below)

Hubert Duprat, *Calcite*, 2008

Iceland spar, glue.
(Diameter 80cm, height 100cm)

Frac Limousin, Limoges.

Photo credit: Frédéric Delpech.



9. (Above)

Hubert Duprat, *Sans titre*, 2011

Ulexite, die, glue.

(dimensions variable)

Courtesy of the artist.

Photo credit: Pete Huggins.

10. (Right)

Roger Hiorns, *Seizure*, 2008

Copper sulphate crystals.

An Artangel / Jerwood Commission

Harper Road, London.

Courtesy of the artist.

Image courtesy of Corvi-Mora, London.

Photo credit: Marcus Leith, London.

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