

A scanning electron micrograph (SEM) of a porous, interconnected network of fibers. The fibers are a vibrant orange color and form a complex, lattice-like structure with irregular, interconnected cells. The background is a dark, almost black, color, which makes the orange fibers stand out prominently. The overall appearance is that of a highly porous, fibrous material, possibly a biological or synthetic scaffold.

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INTERNATIONAL IMAGES FOR SCIENCE 2015

AN EXHIBITION OF THE WORLD'S BEST
SCIENTIFIC PHOTOGRAPHY

A POINT OF DEPARTURE

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If you are reading this essay, you too, must have interests in photography, science, art, and the process of discovery. This catalogue and exhibition was created to recognise extraordinary images made specifically for science that inspires imagination. I have just seen the 100 photographs that were selected for this exhibition. They are truly special and transcend science, allowing us to peek into the unseen world in unique and new ways.

Contemporary photography and imaging are playing new roles in science and society. There is no area unaffected by these initiatives. New methods of imaging are being developed at rates never before witnessed and I am sure when historians chronicle this era, this time will be described as the "Age of the Image". During my more than forty-year career, I have seen the world change in ways that even the most future thinkers could never have imagined.

At this time in its history, the word 'photography' has come to mean so many different things. The term 'imaging' has also come to mean 'photography', amongst other things. As new technologies create new applications, we can expect new terms and even more impressive images. Some of the images contained in this exhibition are examples of cutting edge imaging initiatives. This includes computational photography, the result of numerous individual photographs being assembled as one. One absolute outcome of each of the photographs is that they are engaging on aesthetic levels that simply allow them to be enjoyed for their innate beauty and structure.

For many reasons, there are often very challenging situations that surround photographing in science. Events may be transient, samples may require very dim lighting or subjects may be entirely uncooperative. These challenges make the highest quality pictures difficult to achieve for even the very best scientist photographers. Based on a career of observation, I suspect that the majority of science photographs made today is produced without great concern for the quality of aesthetic outcome. That is what makes the photographs in this exhibition so special. Achieving the results demonstrated here requires great care for accuracy, attention to detail, planning, knowledge and skills.

Nothing is new about photographs being used in science for the collection and preservation of data. Science quickly adopted photography as soon as the technology led to a permanent result. Anna Atkins, a mid-19th century British botanist and photographer, is considered by some to be the first to publish a book dedicated exclusively to using science pictures for conveying scientific data rather than through the use of drawings. Some 175 years later, Atkins' work and that of a few other photographer scientists is still celebrated for its scientific and aesthetic achievements.

Photographs in this exhibition function both as science and art. I think this is rooted in the simple fact that the photographs are scientifically accurate and share scientific facts. They are not science fiction and because of this, these pictures allow viewers to add their own interpretation about what they believe they are seeing. This perceptual component of the process can be exciting and can lead to the creation of intrigue and imagination.

Images of science subjects have often created great confliction for viewers because scientists are taught that science should be factual and emotive responses should be managed. Actually I find that many science images do just that, they inspire me. I am frequently fascinated by new images and I love to be surprised by yet something I have never seen or witnessed. I love the experience of seeing something photographed in a new way.

In his essay published in *'Brought to Light, Photography and the Invisible 1840-1900'*, Corey Keller shared that nineteenth-century popularisers of science did not see the public response of wonderment and pleasure as inappropriate but rather they counted on this reaction to encourage scientific interest from the general public.

In many ways, nothing has changed in the time since those ideas were first published and photography became a tool in science. Images still create a sense of wonderment and inspiration for scientists and lay audience alike. I am honoured for the invitation to write this introductory essay. I hope that some of what I have shared will resonate with you as you enjoy this marvellous collection of photographs. Expect to be surprised.