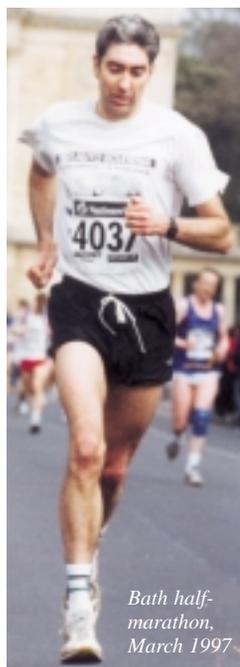




Interview

In Profile: Stephen Mann, Professor of Chemistry at the University of Bristol

Stephen Mann was born in Leeds in 1955, and after obtaining a B.Sc. degree in Chemistry from UMIST, he carried out his D.Phil. with Prof. R. J. P. Williams at the University of Oxford. After a Junior Research Fellowship at Keble College, Oxford, he was appointed to an academic position at the University of Bath where he stayed from 1984 until 1998, when he moved to the University of Bristol as Professor of Chemistry and Director of the Centre for Organised Matter Chemistry. Prof. Mann has spent memorable sabbatical periods with Steve Weiner and Lia Addadi in Israel, and Dan Morse and Galen Stucky at Santa Barbara, and continues to enjoy a large number of international scientific collaborations. Prof. Mann lives in Bath with his wife and their two teenagers.



Bath half-marathon, March 1997

The Professional Side

What is your earliest recollection of science?

I recall a school boy prank in which a large sink was filled with soapy water and natural gas bubbled through it to produce a nice big frothy foam. Then with the chemistry teacher out of the room and with most of us hiding under the lab benches, some brave individual would throw a lighted match into the sink! The flame was very impressive and the suds went everywhere.

Who and what were the most influential factors leading you to a career in science?

Definitely it has to be Prof. R. J. P. Williams at Oxford. Until I worked with Bob Williams I was not sure what I wanted to do. Bob infused me with his chaotic combination of intelligence, fun, curiosity, and creativity, and in so doing he naturally demonstrated a viable alternative to what had been my stereotypical view of scientists.

What do you love about your job?

The freedom to pursue one's own curiosity and be creative, and get paid for it.

What parts of your job could you do without?

I get frustrated with administrative tasks and sometimes become impatient in committee meetings.

What inspires and motivates you?

The elegance of Nature: I still remember the tingle that went down my spine when I first recorded a TEM image of a magnetic bacterium.

Where do you look for ideas?

Paradoxically, I found that looking for new ideas as a goal in itself doesn't often come up with much novelty. Serendipity plays an important role. And because my group's work is highly visual, a sense of aesthetics has served me well.

Which trends in the scientific community are you pleased about?

That the increased level of interdisciplinarity is being achieved without seriously compromising the quality of core subjects, such as chemistry and physics.

Are there any such trends that concern you?

The increasing propensity to apply business management procedures to evaluate and account for academic endeavor. As a colleague of mine says, "you do not fatten a pig by weighing it".

What scientific discovery would you like to have been responsible for?

Penicillin: because millions of lives have been saved and transformed by antibiotics.

The Personal Side

How would your family and friends describe you?

I asked around so take your pick: bombastic (occasionally), confident, determined, egocentric, forceful, friendly, fun, given to lecturing (children), humorous, intense, independent, intellectual, intimidating, loud, perceptive, self-doubting, sincere, stimulating, supportive, trustworthy, witty. Otherwise, just a normal guy.

How do you spend your free time?

Family life and a small number of special friendships, long distance running, and playing the electric guitar.

Where, in the world, is the best place you've been?

Escaping from the British winter to Santa Barbara in 1993 was memorable - sun, ocean, mountains, and breakfast on the beach.

What are you reading at the moment, and what is your book tip?

An Evil Cradling by Brian Keenan, which is also my book tip. Brian Keenan spent over four terrible years as a hostage in Beirut in the mid-eighties.

What music do you listen to?

At the moment I listen mainly to a tape recording of a band I am in that consists of four scientists and is called *A Thousand Zeros*. What I most like about the tape is that because the two guitars are recorded into separate channels I can select for just one guitar during playback. This means that I can drive to work happily listening to myself wailing away whilst the rest of the band struggle to get a note in.

The last film you saw?

Shrek: a family compromise which turned out to be great fun and gently subversive.

If you had not become a scientist, what would you have become?

I honestly don't know. Most of my school friends became apprentices to a trade - electricians, engineers etc - so if I hadn't gone to university I would have probably ended up with an office job.

What do you value in your friends?

Trust, sincerity, honesty, empathy, compassion, and courage.

What is your most important personal goal for the future?

To continue a long-standing commitment to those people who are very close to me.



Research by Stephen Mann and colleagues has led to an increased understanding of biomineralization and the parallel development of new biomimetic approaches in materials synthesis. The inorganic structures of life extend across many length scales and Prof. Mann's work has been focused particularly on the nanoworld of rusty proteins and magnetic bacteria, as well as the beautiful complex forms of microscopic skeletons and shells. At the moment, he is particularly excited about the use of complex fluids to facilitate emergent behavior — such as biomimetic form and hierarchy — during the synthesis of inorganic-based materials. An important scientific goal for the future is to bridge the interface between animate and inanimate matter, to develop small-scale materials with life-like properties such as complexity, self-replication, and adaptation.

Bath, on the River Avon