

Q&A

MAKE A STRONG BOND

Alison Abbott talks to the man who wants theoretical chemistry to ease political strife in the Middle East.

Can scientific ties counter political tensions? Roald Hoffmann hopes so. This Nobel laureate from Cornell University, New York, has organized a series of three chemistry workshops for young scientists from the Middle East, with the aim of forging trust and friendship between participants. The idea stemmed from a small international chemistry meeting in Malta in 2003, which was attended by many chemists from Arab countries.

Hoffmann taught the first of his workshops, called 'Chemistry Bonds', in Jordan's ancient city of Petra in January. The 13 attendees hailed from Jordan, Palestine, Saudi Arabia and Syria, as well as from Israel and Iran.

Political relations in the Middle East are very tense. Can academic classes really help?

It is unrealistic to think a scientific gathering will solve the problems of the region. But perhaps many small actions that build trust and connections between people, especially young people, will help. This is my small contribution to peace, but I'm not romantic or do-gooding about it. The group I brought together could be future leaders of science.

So how could chemistry possibly build trust?

Pere Alemany, my co-teacher from the University of Barcelona, and I worked those young people hard. So there was a certain shared suffering, and victory over that, on their part. Camaraderie builds in such intense situations. But we also did things that bring people close. One day we all cooked a Jordanian meal together; on another, we all trekked through the pink sandstone monuments of Petra. I asked each participant to bring a favourite piece of music. For me, music is the next best thing to science for bringing people together. At 10 p.m. each night we listened to the tapes with drinks: wine, soft drinks. Alcohol wasn't an issue. Some drank it, some did not. I wasn't going to go without wine!

Was religion an issue?

No, not really, but it surprised me how little the participants knew about each others' customs. Most were from Muslim backgrounds, a few were Jewish and there was at least one Christian. Some were secular, some religious. One of the Jewish students ate kosher, which led to illuminating discussion of dietary rites.



Summit meeting: Roald Hoffmann, in the red scarf, brings together young chemists from the Middle East.

Was gender an issue?

Only in that it showed the ignorance we have in the West. Half of the applicants were women.

Did the participants get on with each other?

Yes, although at the beginning there was much shyness. I learned in Malta how little communication there actually is between scientists from the various Arab countries. But I was taken aback when one Israeli confessed she had never had a social conversation with an Arab, even a Palestinian, before she came to the Petra workshop. Several of the participants said something changed in them that week.

Do you think they will stay in contact with each other?

I hope so. We will help them, but I think it will come naturally. The bonds that formed are strong; I feel that. I was touched that one of the Jordanians called the conference coordinator, Vanessa Buisson, to find out if the Israelis had got home alright despite a bombing in Tel Aviv on the day of departure. He said: "They grew part of me that week."

Did the participants risk attack or denunciation by taking part in the workshop?

Part of me says there was no risk; part says, be realistic. Let's be frank: the risks were personal, perhaps greatest to the three Israelis and the American organizers. But in a different way

there were risks to students from the Arab countries. They spent time with Israelis; some people back home don't like that.

How much chemistry did they learn?

A lot. Everything that Pere and I had to teach them from a lifetime of molecular orbital lore. It will serve them well. Only one or two will become theoretical chemists. The rest will use their learning in whatever they do. I was touched when at the end of the course, one student thanked me for "making chemistry come alive for me again".

Where will the next two workshops take place?

In the next 18 months, Harvard's George Whitesides will lead one in Egypt on nanochemistry and Harry Gray from the California Institute of Technology will teach another on bioinorganic chemistry in Qatar. We could teach more. My dream is to convince a Saudi prince to host a workshop for everyone in the region — for his young people, Israelis and others.

'Chemistry bonds' — is a metaphor intended?

Atoms bond because they don't have a choice. That's not bad; good chemistry comes from that bonding. But people do have a choice — and we gave some of them the opportunity to do so.

Alison Abbott is Nature's senior European correspondent.