

## Erratum

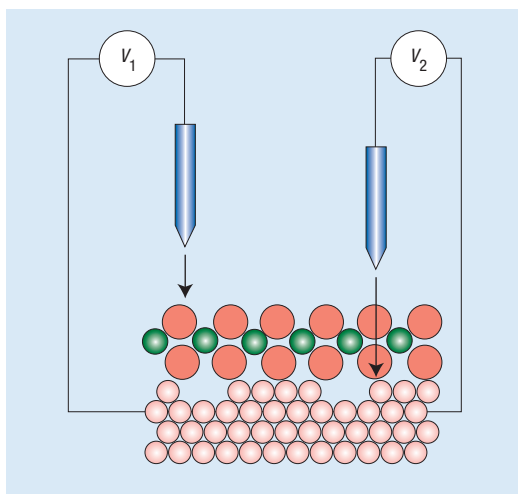
## PEERING BELOW THE SURFACE

Mary Ryan

*Nature Materials* 3, 663–664 (2004).

In this News and Views piece, a problem in the printing process created faults within Fig. 2, which should have appeared as shown below.

**Figure 2** Striking the correct bias. Maurice *et al.* used an STM to image both the oxide surface and the buried interface<sup>3</sup>. At the first bias voltage ( $V_1$ ), the tunnelling current is generated by the conduction band of the oxide film, and the oxide surface can be observed. At  $V_2 (<V_1)$  the unoccupied electronic states of the metal are probed and the image produced corresponds to the metal surface underneath the oxide.



## MATERIAL WITNESS

## The myth and magic of plastic



When the French writer Roland Barthes went to a plastics exhibition in the mid-1950s, he interpreted what he saw in mythical terms. Not only did these substances have “names of Greek shepherds (Polystyrene, Polyvinyl)”, but they were the products of a kind of alchemy: “the public waits in a long queue in order to witness the accomplishment of the magical operation par excellence: the transmutation of matter.”

This was not an overly florid imagination at work. Magic and wonderment were indeed the qualities used to sell plastics to the public. As David Rhees of the Bakken Library and Museum in Minneapolis pointed out at a recent conference in Paris (*The Public Image of Chemistry in the 20th Century*, 17–18 September 2004) from the 1930s DuPont marketed its products, and plastics in particular, as ‘miracles’.

In part, DuPont’s beguiling salesmanship was a response to accusations made in the 1930s that the company encouraged the USA to enter the First World War to create a military market for its products: DuPont was accused of being ‘merchants of death’. That was when the company launched its famous slogan “Better things for better living through chemistry” — the white-coated boffins who took the podium at trade shows were making things for life, not death.

DuPont did not, however, foresee its most potent consumer snare. At the New York World’s Fair in 1939, public demand forced the company to move to centre stage the young women modelling slinky stockings made from a new wonder fibre: nylon, which Wallace Carothers devised five years earlier. In next year’s fair, DuPont exploited nylon’s popularity to the full, as a nylon-stockinged Miss Chemistry emerged from a giant test tube.

War undoubtedly shaped the fortunes of plastics. As nylon was diverted to military uses such as parachutes, its rarity in the public sphere lent it glamour. When nylon stockings were reintroduced into stores after the war, there were riots among buyers. Acrylic aircraft canopies left people anticipating futuristic cars with plastic bubble-shaped windshields. Plastics were now the materials of tomorrow.

As Jeffrey Meikle of the University of Texas at Austin explained at the Paris conference, post-war plastics promised easy domesticity: they were marketed to housewives as easy to clean: fit out your house with plastic surfaces and you could virtually hose it down. Monsanto erected an all-plastic ‘house of the future’ at Disneyland.

And plastics could mimic the appearance of other, more luxurious materials, such as leather, wood and gemstones, enabling everyone to enjoy the superficial opulence of the rich. It was precisely this quality that dazzled Barthes: “The hierarchy of substances is abolished: a single one replaces them all.” Indeed, he concluded, “the whole world can be plasticized.”

But by the end of the 1960s, the romance was over. To the sixties generation, ‘plastic’ meant fake, worthless: an association crystallized in *The Graduate* in 1968, when all the hollowness of American consumerist society is revealed to Dustin Hoffman through the famous career advice: “I just want to say one word to you ... plastics.”

Philip Ball