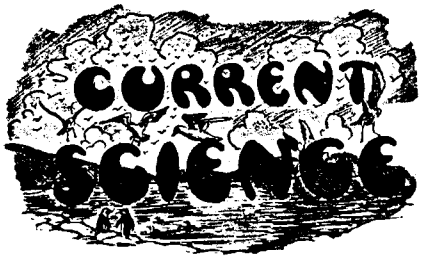
'Shock-induced transformation of liquid deuterium into a metallic fluid'
P. M. Celliers, G. W. Collins, L. B. Da Silva, D. M. Gold, R. Gauble, R. J. Wallance, M. E. Foord and B. A. Hammel
Phys. Rev. Lett., 2000, **84**, 5564–5567

The article by Celliers *et al.* deals with experimental measurements of laser-driven shock waves in liquid deuterium, held at 20 K. The shock velocity and optical reflectance have shown a continuous increase in the reflectance from less than 10% to a saturation value around 50%. The authors conclude that this increase is indicative of the transition of the liquid to a conducting metallic phase. They also state that 'we find no evidence of a discontinuous behaviour of reflectance as a function of shock velocity such as might be expected if the metallization occurred through a first order phase transition', as has been recently predicted by Monte Carlo simulations.

From the archives



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Dr M. O. Forster and the Indian Institute of Science

There is a basis of truth in the philosopher's exclamation—'Blessed is the country which has no history!'. During the ten years of Dr Forster's Directorship the Indian Institute of Science has pursued its peaceful way. There have been no students' strikes or political troubles, and a visitor to the annual gymkhana prize-giving sees nothing but happy faces and generous camaraderie. Some 400 students, including those at present in residence, have passed through the Institute during these ten years. It is no small thing that these young men go out into the world, most of them to fill responsible appointments, all imbued with sane and helpful ideals. When all is said it is probably for this that Dr Forster's name will be remembered with honour and affection. . . .

. . . there is much of obvious progress to record. The greatest advance has been in Department of Electrical Technology, mainly owing to the zeal and initiative of Prof. Catterson-Smith. Wireless laboratories have been equipped and a high tension laboratory and transformer room have been provided, as well as a direction-finding hut, new rooms for battery and charging equipment and a new drawing office.

The number of students has increased from 15 to 53 and the members of the staff from 3 to 8.

The Department of Biochemistry has also developed, the number of students having increased from 16 to 31. A pot-culture house, animal house, insectory and micro-analytical laboratory are among the extensions to the equipment of the Department.

The Departments of General and Organic Chemistry still retain their supremacy in numbers, the students having increased from 52 to 58 and the staff from 4 to 8. Extensions in building and equipment have also taken place.

Through the generosity of Sir Dorab Tata, a Students' Gymkhana Club House has come into being and is the centre of the social life of the Institute.

All these things, by whomsoever originated, demand for their successful carrying out constant attention and support from the Director. . . .

. . . As his own personal contribution to the scientific work of the Institute must be specially mentioned Dr Forster's editorship of the *Journal of the Indian Institute of Science*. 165 parts of the Journal have been published during his term of office, each of which he has edited with meticulous care. In this way he has kept close watch over all the scientific work turned out from the laboratories, and has been able to impress his own high standards of excellence upon staff and students alike. At the close of his tenure of office he has lent his support to the new journal *Current Science* which, while appealing to the scientific public of the whole of India, has its birthplace and headquarters at the Institute.

In brief then we may say that Dr Forster hands over to his successor, Sir C. V. Raman, an institution full of life and possibilities, in good status, socially, scientifically and financially. The foundations have been well and truly laid, what will the superstructure be?