

value of the self-diffusion coefficient of Si, needed to arrange the arriving atoms on proper lattice sites. Linear extrapolation of this border line to higher temperatures yields an intersection point with the LCVD curve at about 1520 K. This value is in good agreement with the temperature limit we find for single-crystal growth of rods. The orientation of the rod axis was found to be close to either $\langle 100 \rangle$ or $\langle 110 \rangle$ crystallographic directions.

Conclusion

Laser induced deposition from the gas phase allows single-step production of material patterns with lateral dimensions from 0.5 μm to several mm. Typical deposition rates in laser pyrolysis are 10 to 100 $\mu\text{m/s}$ compared to 10 to some 100 \AA/s in laser photolysis. The scanning velocities possible in laser pyrolysis reach at least up to about 500 $\mu\text{m/s}$ for strongly adherent films. Laser pyrolysis at visible wavelengths combines high deposition rates and small lateral dimensions of deposits with standard laser techniques, simple optics and adjustment. Disadvantages of laser pyrolysis — compared to photolysis — are the stronger influence of the physical and chemical properties of the substrate and its surface quality and the higher local temperatures.

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Underlining the international character of CERN, both organisational and physical, the start of construction of LEP — the 130-130 GeV electron-positron storage rings — was formally inaugurated by the Presidents of both France and Switzerland on 13 September. In the photograph taken at the ground-breaking ceremony are to the left of François Mitterrand of France, Emilio Picasso, Director of the LEP Project and to the right of Pierre Aubert of Switzerland, Herwig Schopper, the Director-General of CERN. The 27 km circumference of LEP will lie 3/4 in France and 1/4 in Switzerland.

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