mass into a durable solid. The reaction would be regarded by organic chemists as an example of photocrosslinking, but to the artisans of ancient Egypt it was merely a way to make good mummy wrappings. Syrian asphalt, which is also known as bitumen of Judea, is a naturally occurring mineral tar of high molecular weight that, according to the Bible, was used for caulking both Noah's ark and the rush basket of the infant Moses.

Other experiments can be made with the material. For example, in 1824 Joseph Nicéphore Niepce, a French physicist and amateur Egyptologist, coated a glass plate with the same mixture of oil and tar and exposed it to a brightly lighted scene with a camera obscura that he constructed according to the design of Leonardo da Vinci. When Niepce subsequently washed the plate with oil of lavender, the unexposed tar dissolved but the light-struck portions, which were photocross-linked, adhered to the glass, forming an image of the scene. The plastic film served as a lithographic surface for greasy links, thus yielding the first permanent photograph.

Such an image is three-dimensional, with a thickness proportional to the intensity and duration of the incident light; it may appear as either a photographic positive or negative depending upon the lighting and the nature of the surface material.

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References and Notes

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Solar Energy: Ignored Predictions

In News and Comment coverage of the recent Council on Environmental Quality report, which projected that an accelerated development of solar energy technologies could result in their contributing 20 to 30 quadrillion Btu's per year by the year 2000 (12 May, p. 627), it is stated that "No federal agency has ever previously held out even the possibility of so rapid a growth of solar energy. . . ."

As a matter of fact, 4 years ago, the extensively documented but largely ignored Project Independence Task Force on Solar Energy suggested that accelerated solar technology implementation would yield almost exactly this amount of energy by the year 2000 (*1*).

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References and Notes

1. Federal Energy Administration, *Project Independence Blueprint, Final Task Force Report: Solar Energy* (Government Printing Office, Washington, D.C., 1974).