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flaming death for the earth, as contrasted with former pictures of the earth becoming colder and colder as the sun's energy diminishes.

True, the sun probably will become a cold body and hence the earth, too, will sink into an ultimate frozen state, which is known already to have overtaken other stellar objects.

But before that day comes, the sun is going to become much hotter than it now is and life on earth, as man knows it, will probably end. That forecast of the end of the world is an outgrowth of the theory of Prof. Bethe on the transmutation of hydrogen into helium on the sun as the cause of solar heat and radiant energy.

Prof. George Gamow at George Washington University ten years ago worked out the theory of nuclear transformations which made it possible to calculate exactly the rate of energy liberation due to the transformation of the elements at the enormous temperatures of several million degrees existing inside stars and particularly inside the sun.

In recent work Prof. Gamow has extended his studies to include the evolution of stars as they transmute their hydrogen into helium atoms. The main result of the constantly decreasing hydrogen content, it is pointed out, is to increase the luminosity of such stars and to increase their outpouring of energy.

Prof. Gamow estimates that the sun at the present time consists of about 60 per cent. hydrogen. Most important, the sun is bound to become about 100 times brighter than it is at present when its hydrogen content drops only a few per cent.

"Such brightening of the sun will necessarily lead to the melting of the earth and, of course, to the disappearance of life," he stated in a recent lecture.

This then, at the present time, is the

best concept of the end of the world. But before alarms need be raised by present occupants of the earth it should be added that while the sun may be getting hotter it is doing so most slowly as measured by man's calendar. Scientists suspect that there has been no observable climatic change in historical time due to an increase in the luminosity of the sun. Hence the end of the world, from this cause at any rate, is millions upon millions of years in the future.

Science News Letter, December 31, 1938

ASTRONOMY

"Poor Man's Platinum," For Telescope Mirrors

WHITISH metallic rhodium, often called the poor man's platinum because it is widely used for low-cost jewelry and such humble items as collar buttons, may soon be destined for the more lofty role of coating great telescope mirrors and gathering star light from the outermost depths of space.

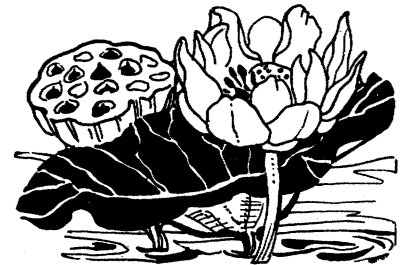
Studies at the National Bureau of Standards by Dr. W. Coblentz and Ralph Stair show that rhodium has several special properties which make it desirable as a surfacing material for telescope mirrors.

Standard mirror coating for many years has been silver, but recently scientists have sought to avoid the serious and annoying blackening of the silver through oxidation. This has meant the resilvering of some telescope mirrors every month.

Rhodium's application by electrolytic action is a standard commercial process today and one that can be done at low cost.

Rhodium's reflectivity, as measured by Dr. Coblentz and Mr. Stair, is superior to chromium in the visible region of the spectrum but not quite so good in the ultraviolet. Silver is very good in the visible but very poor in the ultraviolet wavelengths.

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Improper Names

A ROSE by any other name would smell as sweet, we have been assured by generation after generation of Shakespeare-quoters. Doubtless; but it would cause no end of confusion and perhaps some annoyance if some people should insist upon calling it a thorn-buttercup or a shrub-strawberry. Yet that is no worse than we do with many fine flowers that are entitled to honest names of their own.

Miss Alice Early Hyde calls attention to some of these improper names of our native plants, in *Wild Flower*, the official publication of the Wild Flower Preservation Society.

Misapplication of the name, grass, is particularly and annoyingly frequent, Miss Hyde points out. Thus, we have blue-eyed grass, which is a member of the iris family; yellow star grass, which is an amaryllis; grass of Parnassus, a saxifrage; Whitlow grass, a crucifer; poverty grass, belonging to the rockrose family.

And that word rockrose brings up some more improper names. For though some of the rockroses grow among rocks none of them are roses. And though the tuberose has tubers it isn't a rose, either. And the rose mallow is a mallow and not a rose. Nor is rosemary a rose, nor are rose geranium, rose bay, rose of Sharon and guelder rose at all closely related to the rose family.

Lilies also have alien plants thrust upon them under lily aliases. The calla lily is a cousin of Jack-in-the-pulpit, and the water lily is much more nearly akin to the magnolias and buttercups than it is to lilies. Also, a lovely little plant that is a true member of the lily family is compelled to masquerade under the wholly misleading name of dogtooth violet.

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