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NEW LIGHT ON THE SHINING STONES OF THE JAREDITES

*"What will ye that I should prepare for
you that ye may have light?" (Ether 2:25)*

The preparation of light sources for the Jaredite barges has long been an enigma to Book of Mormon readers. The Lord indicated the impracticality of using normal sources of light, saying, "Ye cannot have windows, for they will be dashed in pieces; neither shall ye take fire with you, for ye shall not go by the light of fire. . . . Therefore what will ye that I should prepare for you that ye may have light?" (Ether 2:23, 25).

In response, the brother of Jared "did molten out of a rock sixteen small stones; and they were white and clear, even as transparent glass" (Ether 3:1). Placing them before the Lord, he petitioned, "Touch these stones, O Lord, with thy finger, and prepare them that they may shine forth in darkness . . . that we may have light while we shall cross the sea" (Ether 3:4). By touching the stones, the Lord somehow changed them, causing them to emit a light bright enough to illuminate the inside of the barges.

The physical oddity of such a source of light, however, has been a cause for considerable ridicule for the Book of Mormon. Comments such as the following are typical:

The story of Ether's stone candles overtaxes marvelousness . . . and these sixteen stone-candles gave

light for eight vessels while crossing the ocean to America. Who is eager to believe this story? Shall we believe it simply because we cannot disprove it? They say there is a "man on the moon," and that "the moon is made of green cheese," and we cannot disprove it—shall we therefore believe it?¹

More recently Weldon Langfield expressed his opinion of the shining stones: "The words 'patently ridiculous' seem too kind."² Many critics completely dismissed the Book of Mormon because they could not believe that such a light source was physically feasible.

Sandia National Laboratories in New Mexico have recently developed radioluminescent lights that invite some interesting comparisons with the Jaredite stones. These lights are intended to "serve needs for lighting where no electricity is readily available"³ Their life expectancy is about 20 years, and they are described as being "bright" and very "intense."

The radioluminescent lights are made from a highly porous silica matrix—*aerogel*—in which a phosphor such as zinc sulfide is dispersed. The radioactive source of the lights is tritium gas, which when incorporated into the aerogel, actually becomes chemically bonded to the aerogel matrix.⁴ The radioactivity of tritium results in beta decay. The beta particles (electrons) "permeate through the open spaces of the aerogel and strike the phosphor particles, exciting them and causing them to emit light."⁵ The majority of the light emitted escapes to the outside, whereas the beta radiation is contained inside the matrix. Therefore there is no appreciable external radiation.

Radioluminescent light is consistent with and supplies an intriguing parallel matching the requirements of the Jaredite stones: they are small, long-lasting, and physically harmless. It is possible that the Jaredite stones were created in a similar fashion, according to existing physical laws. Although making the molten rocks would most likely have

boiled off any tritium present, it is conceivable that the Lord could have altered some other molecule in the stone to create the radioactive isotope that would produce the glowing effect. It is also possible that he could have simply infused the stones with tritium gas as the Sandia researchers have done. Interestingly, years ago Elder Spencer W. Kimball proposed that perhaps the Jaredite stones were illuminated "with radium or some other substance not yet rediscovered by our scientists."⁶

Of course we can only speculate about the process that led to the Jaredite lights, and even the Sandia researchers are quick to caution that scientific knowledge about radio-luminescent lights is still in the early stages of development. Future discoveries and further developments may more closely illuminate the manner in which the molten Jaredite stones were caused to fluoresce, but for now this latest development certainly helps us appreciate that the Book of Mormon refers to realities we are only now rediscovering.

Research by Nicholas Read, Jae R. Ballif, John W. Welch, Bill Evenson, Kathleen Reynolds Gee, and Matthew Roper, originally published as a FARMS Update in Insights (July 1992): 2.

NOTES

1. William Sheldon, *Mormonism Examined* (Brodhead, Wis.: By the author, 1876), 139–40.
2. Weldon Langfield, *The Truth About Mormonism* (Bakersfield, Calif.: Weldon Langfield, 1991), 45.
3. Sandia National Laboratories, News Release, Albuquerque, New Mexico, September 27, 1990, p. 1.
4. See *ibid.*, p. 3.
5. *Ibid.*
6. Spencer W. Kimball, untitled talk, *Conference Report* (April 1963): 64.