

# REFERENCES

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Marshall's account of how the remarkable thermal properties of monoisotopic diamond at 300 K came to light needs clarification. Between General Electric's first diamond synthesis in 1954 and my patenting carbon-12 and carbon-13 diamond in 1975, they did nothing constructive in response to early theoretical (1-2) or cryogenic experimental work (3) on the isotopic enhancement of heat conductors. Far from "hanging around their labs for years" or having "learned much of what" I know from GE, GE researchers visited me at Harvard and I visited their lab on only a few days over decades.

My years at Harvard's Gordon McKay Laboratory, like my three appointments to serve on its Faculty of Arts and Sciences, seem more germane than my lack of "degreed graduate or undergraduate" from Harvard. Thomas Anthony and Glenn Slack of GE share with me common mentors like Harvard's Nicolaas Bloembergen and Phillip Morrison at the Massachusetts Institute of Technology, whose personal knowledge of GE's arrogation of my work led them to write in protest to its directors.

Marshall quotes GE as stating that "none" of that letter's signatories "called GE to hear our side of the story." But I have learned that GE's Vice President for Research & Development, Walter Robb, called both former presidential science adviser, Jay Keyworth and MIT's Marvin Minsky months ago. Robb told Minsky GE was "bending over backwards to give [Seitz] appropriate credit."

Although GE researchers cited my work (4) in their recent patent disclosures, they did not cite my February 1987 MIT diamond workshop presentation "Isotopic enhancement of thermal conductivity and (laser) damage thresholds in diamond" in their recent paper "The thermal diffusivity of isotopically enriched  $^{12}\text{C}$  diamond" (5), which reported the experimental confirmation of both the effects predicted in my earlier work—an improvement in thermal conductivity an order of magnitude greater than that predicted by Slack and an order-of-magnitude enhancement of the laser damage threshold. Yet GE referred (6) to our differing views at a July 1987 seminar and, contrary to their denial quoted by Marshall, I did subsequently publish a paper on monoisotopic diamond and its applications (7).

I have recently discovered that GE was *not*

the first firm to heed my admonition to do the only thing necessary to reduce monoisotopic diamond to physical reality—just buy some purified carbon-12 or carbon-13. Without benefit of a low-pressure first-step diamond synthesis, DeBeer, Inc.'s researchers grew 0.999-pure carbon-13 diamonds from graphite in 1986 (8).

While Slack and other theoreticians long held that only a trivial improvement in heat conduction would occur at room temperature, I contended in my 1987 presentation that owing to diamond's remarkably high Debye temperature it could be greater than "100 WCM/ $^{\circ}\text{K}$ ." While it took GE a long time to empirically verify this technically important order-of-magnitude effect, its economic ramifications were quickly grasped—potential sales of \$100 million a year have brought corporate lawyers into conflict with scientific ethics—any granting of credit raises the specter of compensation.

The work on the theory of conductivity done a quarter of a century or more ago deserves to be acknowledged, but GE's attempt, for apparent reasons of commercial advantage, to rewrite the more recent history of science should be rejected for what it is: an Orwellian affront to both the truth and to the honor of the scientific profession.

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4. R. Seitz, U.S. Patent 3,895,313, 15 July 1975.
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7. R. Seitz, in *Diamond Optics, Proceedings of the Society of Photooptical Instrumentation Engineers, 16-18 August 1988*, R. Feldman and S. Holly, Eds. (Society of Photooptical Instrumentation Engineers, Bellingham, WA, 1988), vol. 969, pp. 124-137.
8. M. Seal *et al.*, European Patent Application 86304926.8 *Eur. Pat. Off. Bull.*, no. 86/52 (30 December 1986), (abandoned).

*Erratum:* In Jean L. Marx's Research News article "Alzheimer's pathology explored" (31 Aug., p. 984), Jie Kang, Hans-Georg Lemaire, and Benno Muller-Hill of the University of Cologne, Cologne, Germany, should have been credited for their work in cloning the gene for the amyloid protein.

*Erratum:* In the report "Underexpression of  $\beta$  cell high  $K_m$  glucose transporters in noninsulin-dependent diabetes" by J. H. Johnson *et al.* (26 Oct., p. 546), the authors' affiliations were incorrectly given. J. H. Johnson, A. Ogawa, L. Chen, T. Alam, and R. H. Unger are at the Center for Diabetes Research, University of Texas, Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235 and the Veterans Affairs Medical Center, Dallas, TX 75216. L. Orzi is at the University of Geneva School of Medicine, 1211 Geneva 4, Switzerland. C. B. Newgard is at the Center for Diabetes Research, University of Texas, Southwestern Medical Center, Dallas, TX.

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