Support of Basic Science by Edgar Edelsack

Ed was very active in the area of applied superconductivity. At the same time, he was deeply concerned with basic science. This point should be stressed, because one may think that the Office of Naval Research should be focusing only on some specific applications, related to Navy. However, Ed understood that the Office of Naval Research (ONR) was the oldest scientific agency in the country and he was always supporting the development of basic science. He thus organized a nice program and, thanks to him, such scientists as Leon Cooper, Bill Little, Mike Tinkham, Bob Dynes and many others were able to carry out interesting studies on fundamentals of physics, biology, etc. Ed was trying to protect basic science and this was not an easy task. For example, he supported the project on artificial intelligence and neural networks run by Leon Cooper. When one top administrator confronted him and asked why this topic is important for ONR, Ed replied "This topic is important, because people working for US Navy should have good brains".

Ed had been always trying to determine and encourage the studies in the most promising scientific directions. In 1969, he enthusiastically supported the International Symposium on Physical and Chemical Problems of Possible Organic Superconductors, which was held in Hawaii with Bill Little chairing it. The field of organic superconductivity did not exist at that time. Twelve years later, the phenomenon of organic superconductivity was discovered (Denis Jerome, 1981). In 1989, twenty years later, Ed encouraged Bill to organize the second Conference on organic superconductivity to review the progress and develop some new approaches. According to Ed, the organic superconductivity was still the promising direction and, indeed, the following discovery of superconducting fullerenes, and then carbon nanotubes, along with recent observation that an organic doped polymer displays the state with T_c=120K(!), proved that Ed's interest was totally justified[1].

Ed also was interested in history and he always thought that the knowledge of history is important for scientists, since it allows them to place their results in a proper perspective. In 1986 as the Chairman of the Applied Superconductivity Conference in Baltimore, he organized a Special Symposium with the title: "Kamerlingh Onnes Symposium on the Origin of Applied Superconductivity - 75th Anniversary of the Discovery of Superconductivity". John Bardeen was invited to be the Chairman of this Symposium, and such scientists as Brian Pippard, Leon Cooper, John Rowell and J. E. (Jean) Kunzler were among the speakers.

In 1987, Ed actively supported the Conference on Novel Superconductivity (Berkeley, CA), which was the first large conference with focus on recent discovery of high T_c superconductivity. Jointly with Don Gubser and Stu Wolf, he wrote a large and very interesting article "The Rocky Road to High Temperature Superconductivity", published

[1] R. Wang et al., ArXiv:1703.06641 (2017)

in the book “Novel Superconductivity” (Plenum Press, 1987). I had the honor and pleasure to benefit from Ed’s vision and also helped to organize this Conference. The discovery of high T_c compounds did not come to Ed as a total surprise, but rather as a logical step, which was prepared by previous studies. This was so, because of his knowledge of history and deep understanding of the phenomenon of superconductivity.

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