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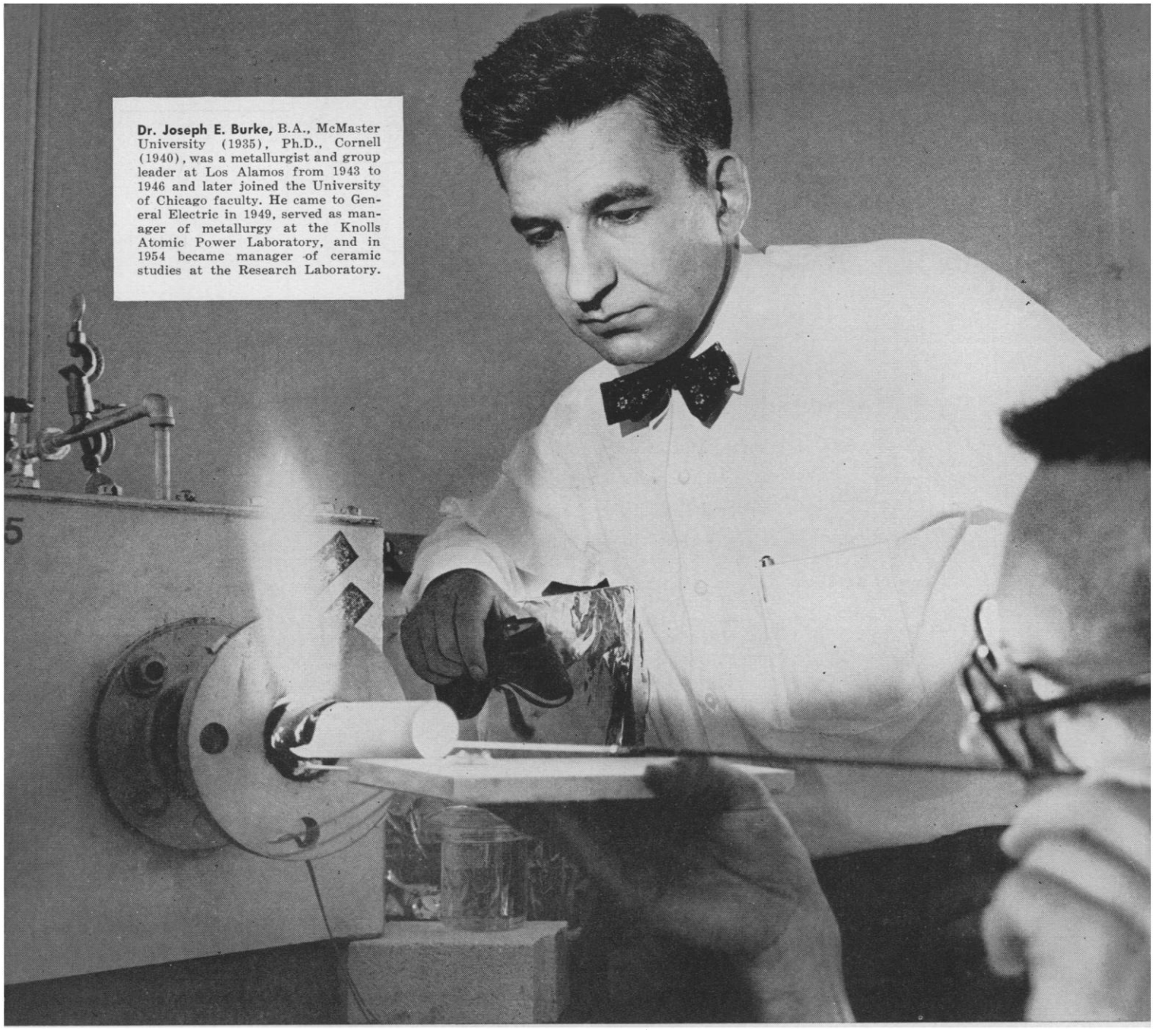

Dr. Joseph E. Burke, B.A., McMaster University (1935), Ph.D., Cornell (1940), was a metallurgist and group leader at Los Alamos from 1943 to 1946 and later joined the University of Chicago faculty. He came to General Electric in 1949, served as manager of metallurgy at the Knolls Atomic Power Laboratory, and in 1954 became manager of ceramic studies at the Research Laboratory.

Ceramics for the jet age

General Electric's Dr. J. E. Burke seeks better ceramic materials by studying their microscopic structure

During a decade as a "practicing metallurgist," Dr. Joseph Burke contributed to the knowledge of structure and kinetics in metals. He also developed an interest in the crystalline cousins of metals: ceramics. Recognizing the potential of ceramic materials, Joe Burke turned his talents toward increasing and exchanging the mutually useful information produced by research in both ceramics and metallurgy. Now he is leading an intensive effort at the General Electric Research Laboratory to learn more about the *structure* of ceramics — and the effects of structure on mechanical, electrical and magnetic properties.

At General Electric, ceramics research already has created unique insulators for vacuum tubes, new ferrites for electronic uses, and transducers whose applications range from hi-fi to ultrasonics. As the day of "non-brittle" ceramics comes ever nearer, Joe Burke and his associates expect their non-metals may be the answer to many high-temperature problems of the jet age.

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