

## Katharine Burr Blodgett FREE



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three editions. He published research papers on ballistic galvanometers and fluxmeters.

After this retirement, Randall taught courses at Cornell University, Harpur College (now the State University of New York at Binghamton) and Utica College. He subsequently spent several years conducting research for the Syracuse University Research Corporation.

His associates remember Randall as a modest, friendly and cooperative colleague whose devotion to his teaching and whose high standards of laboratory performance will remain ideals worthy of emulation.

JOHN W. TRISCHKA  
Syracuse University

### Katharine Burr Blodgett

Katharine Burr Blodgett, a retired General Electric scientist who was internationally recognized for her research on thin films, died on 12 October. The 81-year-old scientist was the first woman to earn a doctoral degree in physics from Cambridge University.

Blodgett was the inventor of a technique for making non-reflecting "invisible" glass, a material used in virtually all camera lenses and many other optical devices. In 1938, she applied a coating of 44 monolayers of transparent liquid soap to glass to reduce reflections from the surface. Later, scientists discovered a means for making similar non-reflective films adhere permanently to the glass.

She was also responsible for developing an instrument that can measure film thicknesses to within a few angstroms. Knowing that each layer of a film composed of many layers reflects a specific color, Blodgett constructed a device that would allow investigators to determine the thickness of a film by comparing the film's color with the colors in the gauge. It proved to be a simple and accurate method of measurement.

Blodgett took her bachelor's degree from Bryn Mawr College in 1917 and her master of science degree from the University of Chicago the following year. She then joined the staff of the GE Research Laboratory, where she worked with Nobel laureate Irving Langmuir. On the advice of Langmuir, Blodgett enrolled in the doctoral program at Cambridge University. She received her PhD in 1926. Upon her return to GE, she worked with Langmuir on improving tungsten filaments in electric lamps. During the Second World War, Blodgett did research on methods of removing ice from airplane wings. She is also credited with the development of a new type of smoke screen. In 1963, the scientist who Langmuir described as a "gifted experimenter" with a "rare combination of theoretical and practical ability," retired. □

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