

both to the standard Faddeev method and to the conceptually simpler continuum discretized coupled channels method. Characteristically, Austern, in that paper, directly examined coordinate-space boundary conditions rather than resort to the more usual complete-continuity arguments.

Austern once described his main interests as physics, family, hiking in the mountains, and music. Highly intellectual, he communicated easily and comfortably with people on all levels. Always outgoing, he maintained personal contact with a worldwide circle of professional colleagues. He was a master at making theory understandable to experimental physicists, and his teaching was creative and responsible. He disdained being competitive rather than cooperative in science or in personal life, and he did not seek recognition. Apart from his scientific legacy, many of us owe him a great deal for his generous help and wise mentoring.

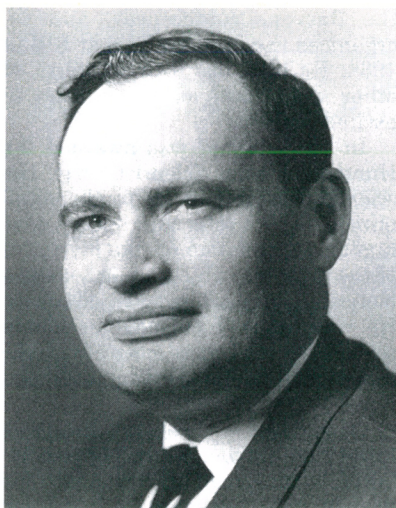
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## Simon Larach

Simon "Si" Larach, a solid-state chemist and physicist who was instrumental in the development of modern color television phosphors, electroluminescent phosphors, and various radiological medical technologies, died on 20 January in Baltimore, Maryland, of complications from a stroke.

Born in Brooklyn, New York, in 1922, Larach graduated from the City College of New York in 1943 with a BS in chemistry. During World War II, he conducted medical research on anti-malarial drugs. He also served in the US Army Air Corps as a radar officer after taking military electronics courses at Harvard and Yale universities. In 1946, he joined the David Sarnoff Research Center of the Radio Corporation of America (RCA) in Princeton as a research chemist. He spent 41 years at the center, the last 20 of which he was a fellow of the technical staff.

In 1955, Larach received his PhD in chemistry from Princeton University. During the 1950s and 1960s, he led a research team at RCA that was instrumental in creating a new red-emitting, rare-earth phosphor for color television. This family of phosphors—rare-earth oxysulfides—has many applications, such as in cath-



**SIMON LARACH**

ode-ray tubes and x-ray intensification screens, and the red emitter europium-doped yttrium oxysulfide is still used in color television tubes worldwide. Larach also helped design the US solid-state physics exhibit for the 1958 Brussels World Fair.

During the 1960s and 1970s, Larach was a visiting professor at Princeton. A proponent of industry-academic collaboration, he worked with researchers in both arenas during those years to study electron paramagnetic resonance. From 1969 to 1970, Larach was a visiting professor of chemistry at Hebrew University in Jerusalem, where he helped to establish the graduate school of applied science. Throughout his career, he periodically returned to Jerusalem to teach; he also lectured at institutions in the US, Europe, and Asia.

In 1974, Larach began applying his knowledge of phosphors and wave propagation to medical technologies. He was appointed as an adjunct professor of radiology at MCP Hahnemann University in Philadelphia in 1975 and at Columbia University in 1979, while retaining his position at RCA.

Following his retirement from RCA in 1987, Larach formed a consulting firm that helped the US Army develop new phosphors and phosphor technologies for use in "heads-up" military displays, in which the image is projected on windshields.

A recipient of more than 50 patents, Larach served on President Lyndon B. Johnson's Commission on Laboratory Safety and, in 1966, was awarded the David Sarnoff Medal, given by the Society of Motion Picture and Television Engineers for outstanding technical and scientific achievement. From the 1960s into the

1980s, he was an editor for the *Journal of the Electrochemical Society* and a contributing editor to the Van Nostrand science encyclopedia.

Larach was a congenial person who inspired and encouraged others to create and try out new materials and synthesis techniques.

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## Nimai Chad Mukhopadhyay

Nimai Chad Mukhopadhyay, a professor of physics at Rensselaer Polytechnic Institute (RPI), died at home in Loudonville, New York, on 15 May after a long and courageous battle with a deadly illness.

Nimai was born in Maharampur (near Calcutta), India, on 17 January 1942. In 1963, he earned a BSc in physics from the University of Calcutta. He began graduate school at the University of Chicago in 1968, having already received conventional training in low-energy nuclear physics and several years of research experience. He earned both an SM (in 1970) and a PhD (in 1972) in theoretical nuclear physics. He chose to enter the then-fledgling field of high-energy nuclear physics. Nimai clearly grasped the importance of his newly chosen field, so he made certain that he received a thorough grounding in particle physics and quantum field theory.

Beginning with his PhD thesis and continuing with research from about 1972 to 1981 at the University of Maryland, College Park, and the Swiss Institute of Nuclear Research (now known as the Paul Scherrer Institute) in Villigen, Nimai focused



**NIMAI CHAD MUKHOPADHYAY**