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Dr. Kinch, an internationally known specialist in IR device and materials physics, is the Chief Scientist at DRS Infrared Technologies located in Dallas, Texas. He was educated at Wadham College, Oxford University, where he took a first-class degree in physics in 1960. He subsequently studied at the Clarendon Laboratory under Dr. B. V. Rollin and obtained a D. Phil. degree in 1965. In 1966 he joined the Central Research Laboratories of Texas Instruments, where he was engaged in research into the physics of far-infrared materials. He transitioned to infrared materials in 1969 and thereafter became fully embroiled in the many facets of the physics of HgCdTe. He was elected a TI Research Fellow in 1985 and became the leader of the Sensor Physics Branch in the Sensors and Infrared Laboratory (part of TI’s Corporate R&D Laboratory) until the demise of TI’s Central Research Laboratories in the mid-1990s. At that time, the infrared R&D effort was transitioned into TI’s Defense Electronics Group, which was later acquired by Raytheon in 1997. Upon Raytheon’s further acquisition of Hughes Aircraft Corporation, the Dept. of Justice mandated the divestment of the original TI IR sensors group to DRS Technologies in 1998. Dr. Kinch subsequently became Chief Scientist of DRS Infrared Technologies in 2000.

For the past 40 years, he has been engaged in (and published seminal papers on) all facets of HgCdTe material, processing, and detector research and development for first-, second-, and third-generation IR systems. He has authored, or co-authored, in excess of 200 publications, mostly in the open literature, in internationally recognized journals, and has been awarded several patents in the field of IR sensors. In 1987, together with D. D. Buss and R. A. Chapman, he received the IEEE Jack A. Morton Award for outstanding work in semiconductor devices, involving their research into HgCdTe monolithic IR charge-coupled and charge-injection devices. Dr. Kinch was elected a Fellow of the American Physical Society in 1988 and a Fellow of the Military Sensors Symposium in 2002. He is currently engaged in an effort to increase the operating temperature of HgCdTe detectors of all cutoff wavelengths into the uncooled range, as well as programs to fully develop the capability of HgCdTe electron avalanche photodiodes for all regions of the IR spectrum.