



Biographical Summary:

Bruce McCaul is the founder and President of Oxigraf, Inc., a manufacturer of tunable diode laser oxygen sensors and analyzers. Formerly, he served as CEO of various companies manufacturing xenon lamps, silicon photodiodes, pyroelectric detectors, medical lasers, and scientific lasers. He holds a Ph.D. in physics from Stanford University and an MBA from Harvard University.

Bruce W. McCaul, Ph.D.

President

E X P E R I E N C E

Oxigraf **1990 - Present**

President. Leads manufacturer of fast and accurate gas sensors for medical and aerospace applications using laser diode spectroscopy. Seven issued patents in laser diode spectroscopy of oxygen.

ILC Technology, Inc./ Perkin-Elmer **1987 - 1990**

ILC Technology, Inc. (ILC) is the leading manufacturer of flash and arc lamps for solid state lasers, medical fiber-scopes, spacecraft, and infrared countermeasures

Director **1987 - 1995**

President, Chief Executive Officer **1987 - 1990**

Led the renewal process at the ILC light sources division and at the United Detector Technology (UDT) light sensors division (discontinued in 1989). ILC sales grew from \$12 to \$52 million in six years; substantial losses became 9% net profits.

Cooper Lasersonics **1983 - 1986**

Cooper Lasersonics in this time period was the leading manufacturer of surgical lasers with sales growing from about \$34 million in 1983 to \$74 million in 1986.

Vice-President, New Technologies **1985 - 1986**

Established Infrared Fiber Operations which developed waveguides for transmission of CO₂ laser radiation .

Chairman, Ophthalmic Division **1984 - 1985**

Organized a new division to market ophthalmic lasers. Sales grew from an OEM base of about \$1 million in 1983 to a final market base of about \$20 million in 1986. Established excimer laser development teams to explore refractive error correction by laser sculpturing of the cornea; this program led to sales of \$2 million in 1986 and became Visx.

Vice-President, Scientific Division **1983 - 1984**

Led consolidation of Lexel ion lasers and Molelectron products with sales of \$12 million.

Molelectron Corporation **1970 - 1983**

Molelectron in the mid-1970s became the largest manufacturer of pulsed tunable lasers and of pyroelectric infrared detectors. In 1978 Molelectron introduced a continuous wave Nd:YAG laser for medical applications. This product achieved sales of \$3 million by 1983 and \$15 million by 1986. In 1983, Molelectron was sold to Cooper Lasersonics.

Chief Executive Officer **1970 - 1983**

E D U C A T I O N

B.S., Yale University, magna cum laude, 1961 physics. **M.B.A., Harvard Business School**, with distinction, 1966.

M.S., and Ph.D., Stanford University, 1963 and 1969, with Professor A.L. Schawlow.

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