Contact: Matthew Cusack
Location: East Greenbush, NY
Email: mcusack@xos.com
Tel: 518-880-1500
Website: www.xos.com

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
Larta Institute
National Institutes of Health Commercialization Assistance Program (NIH-CAP)

Company Profile

Industry Sector: Material analysis, optics and instrument production.

Company Overview: XOS was founded in 1990 to be "The World Leader in Optics that Significantly Enhance X-ray Applications." The objective has since been expanded to be the world leader in application-specific X-ray based analyzers for on-line, transportable, and portable applications. XOS has introduced robust X-ray analyzers that move analysis out of the lab and into petroleum refining, environmental monitoring, and medical applications.

Target Market(s): X-ray analysis systems are important for essentially all industries that use materials — from cement to semiconductor to high-performance super alloys to petroleum — measuring aspects such as semiconductor film thickness, stress in turbine blades, groundwater contamination, sulfur levels, and air particulate composition.

Key Value Drivers

Technology*: The XOS Body Fluids analyzer is an instrument platform for non-destructive, quantitative measurement of multiple trace elements/metals (e.g., lead, iron, copper, zinc) in physiological specimens of human origin (e.g. whole blood, plasma, serum, urine).

Competitive Advantage: Low cost of ownership and maintenance. No sample or reagent preparation required because the method is non-destructive, push-button walk away analytical technique that does not require a highly trained specialist to operate.

Plan & Strategy: Our strategy is to manufacture the "engine" of the instrument and work with our partner for distribution, marketing, sales, and service. We seek an active collaboration with original equipment manufacturers (OEMs) who will add this product to their existing offerings.

*Technology funded by *NCRR (Grant # 5R44RR22001-03)* and being commercialized under the NIH-CAP

Management

Leadership: All members of the management team have previous experience managing larger organizations than they are responsible for at XOS. To aid in the coordination of the business and technical issues, each member has technical degrees and management experience. Most have a business degree as well. They joined XOS to with the specific goal of growing the organization.

Scientific Advisory Board: XOS has an active Board for the Corporation

Product Pipeline

Focusing polychromatic or monochromatic optics for microfocus X-ray fluorescence – these are used for a wide variety of applications such as elemental composition for consumer products, medical research, production control, and microelectronics mapping.

Collimating polycapillary optics are used for parallel beam x-ray diffraction. The XRD optics have demonstrated significant improvement for "texture" (crystalline orientation), phase identification, and stress measurements.

Monochromatic Wavelength Dispersive X-Ray Fluorescence (MWDXRF) for sulfur-in-fuel analysis using our proprietary doubly curved crystal (DCC) optics. Development of this optical configuration has resulted in on-line and bench-top units that are currently sold to many of the largest petroleum companies in the world.

XOS produces and markets its own combined source-optic called X-Beam. X-Beams have integrated X-ray sources, pre-aligned X-ray optics, shutters, control diagnostics, high voltage and radiation safety interlocks, and startup and stability controls.