

Alex received the M.Sc. degree in Physical and Quantum Electronics and Ph.D. degree in Solid-State Electronics from the Moscow Institute of Physics and Technology (MIPT), Moscow, Russia. His professional career started with the Institute of Applied Physics in Moscow where he developed far-infrared photo-detectors for the aerospace industry. For twelve years Alex was an engineer / senior scientist / R&D manager at the Piezoceramics Division of Phonon Corp in Moscow. Later Alex was a specialist-consultant for five years with Dong IL Technology Co., South Korea. Alex's career has over twenty years of experience with piezo-electronic materials and devices as he developed piezoceramic resonators and filters, sensitive and powerful ultrasonic transducers, piezo sensors and piezo-transformers. He wrote Russian standards for piezo-ceramic material characterization / production. Since 1997 he permanently lives in the U.S.

In 2007 he was a consultant for COMSOL in their development of new 3.5a version of the renowned simulation product. His research interests include experimental and theoretical study of dissipative piezoelectrics, material characterization.

As a Senior Transducer Design Engineer he worked at PiezoTechnologies, Indiana, for 5 years. He was involved into multiple R&D projects in broad areas of piezoceramics applications, including: Oil and Natural Gas industries (tool calibration and mud velocity measurements); Medical industries (High Intensity Focused Ultrasound – HIFU); Non-Destructive Testing - NDT (flaw detection); Military (ultrasonic ID system), etc.

For the next 9 years he was a Senior Transducer Engineer with Daniel / Emerson Automation Solutions, Houston TX, developing new ultrasonic transducers for new generation gas and oil flow meters, operating under high pressures, wide temperature range, and harsh chemical environment.

In 2018 he returned back to newborn PiezoTechnologies / Amphenol as a Senior Transducer Engineer to apply his experience into broader applications, being involved into oil and gas, and medical projects for Halliburton, Baker Hughes, BD, etc.

Alex is an IEEE member and a reviewer for the IEEE Ultrasonics, Ferroelectrics and Frequency Control and European Ceramic Society Journals. He has authored over 80 papers and holds 15 patents in the area of piezoceramic materials, resonators, and transducers.

Specialties: Basic areas >: Acoustics * Piezoelectrics / Piezoceramics * Ultrasonic Transducers & Devices * Theory and R&D * Design * Manufacturing * COMSOL / ANSYS / SolidWorks simulation and modeling *** Additional areas >: Physical Electronics * Semiconductors * Dielectrics * Education