

Karen L Hanson

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OCCUPATIONAL GOAL:

Development technician with a focus on analytical labs and quality assurance roles. Experience in both R&D and production environments with chemical, analytical, and safety-oriented skills. Looking for a supervisory position in a Quality/ EHS field.

SUMMARY:

- Research and Development Technician, collaborating with engineering, production, QA, and marketing during the development and commercialization of novel materials.
- Create, implement, and maintain calibration schedules, documentation, and preventative maintenance on Laboratory equipment.
- Develops work instructions for laboratory equipment. Continually improves documentation and safety procedures involved with lab work.
- Procurement and purchasing of laboratory supplies including utilizing SAP.
- Developed relationships with equipment vendors to facilitate maintenance and repair of key analytical equipment. Interfaces with vendors on technical issues, validation, and purchasing of new equipment.
- Interest in HSE and developing operating standards, including chemical stewardship, training, and safety initiatives.
- Proficient in operation, calibration, and preventative maintenance of several types of analytical instrumentation.

EDUCATION:

- **Bachelors in Biology**, May 1994
D'Youville College of Buffalo, New York
- **Associates in Liberal Arts**, May 1991
Villa Maria College, Buffalo, New York
- **Certificate ISO 9001:2008 Certified Auditor**, September 2011
UB School of Engineering, Buffalo, New York

SKILLS:

- Microsoft Office (Outlook, Excel, PowerPoint)
- Proficient in use and routine maintenance of analytical systems including Agilent Gas Chromatography, HPLC, Nova BET, XRF, Microtrac and Sedigraph analyzers. Karl Fisher Titration, DSC, XPS, XRD, and SEM.
- Multiple powder processing and production of a large variety of ceramics and dielectric materials including extrusion, billeting, milling, and sintering.
- Cathode and electrolyte ink fabrication and milling.
- Equipment knowledge of Mellen furnaces, Sweco Mills, Winkworth mixers, Testometric, Carver Press, Amrel and Eurotherm controllers.

PATENTS:

- Low Bio-Persistent High Temperature Resistant Inorganic Fibers
WO2022/126118 A1- LBP 1300 Co-Inventor
- Crystalline Silica Free Low Bio Persistence Inorganic Fiber
US11203551B2 (A1) Co-Inventor
- Inorganic Fiber
US10023491B2 (A1) Co-Inventor

EXPERIENCE:

Unifrax/Alkegen**12/2014 – present****600 Riverwalk Parkway, Suite 120, Tonawanda, NY, 14150****Development Technician III- Melting & Fiberization (2014-2022) Flexcat (2023)**

- Adaptable technician who works hand in hand with engineering to develop concepts to production through PDR or MDR. Familiarity with Technical service to solve customer, plant, or material performance issues as required.
- Focused on continual improvement, optimization, and benchmarking to validate current lab methods and protocols.
- Various analytical methods applied during development of High Purity Silica fiber and other fiber intermediate products including ISOFRAX 1400 and Insulfrax 1300HT. Target launch dates achieved collaborating with cross functional teams.
- Glass Chemistry Lab owner and highly involved in lab improvements, procurement, documentation, and HSE.
- Coordinates and works with several outside vendors for equipment maintenance, MSA, and lab testing to support multiple business units as needed.
- Prepares reports, purchasing documents, and data to support business needs.

Goodyear Tire & Rubber**2/2011 – 12/2014****5500 Goodyear Drive, Niagara Falls, NY 14304****Process Operations Technician**

- Conducts routine chemical testing for quality standards and product release.
- Preparation of chemical standards and samples for analysis ensuring stability and conformity.
- Utilizes gas chromatography and wet chemistry for analysis.
- Calibration and maintenance of all gas chromatography, pH meters, Karl Fisher Titration, XRF, and DSC instrumentation.
- Collects and monitors plant environmental samples following established protocols under ISO:14001.
- Management of calibration records and documentation following ISO: 9001 standards.
- Inventory of plant raw materials and procurement of laboratory supplies.
- Conducts internal quality and environmental audits ensuring compliance.
- Approval and release of incoming raw materials through SAP.
- Collaborates and develops established relationships with vendors, including on site service requests and new equipment review.

Nanodynamics Energy Inc.**10/2004 – 06/2009****901 Fuhmann Boulevard, Buffalo, New York 14203****Senior SOFC Technician**

- Supports and works collaboratively with R&D and Pilot engineering in the process and fabrication of solid oxide fuel cells.
- Utilizes process and product knowledge to lead other technicians to achieve processing goals.
- Monitors pilot processes, procedures, and lot data ensuring compliance.
- Provides technical leadership and expertise to turn empirical methods into practical pilot process for manufacturing.
- Works under minimal supervision on independent projects and supports statistical studies.
- Reports research improvement, product deficiencies, and makes recommendations based on independent assignments.

Ferro Electronic Material Systems**06/2004 – 09/2004****4511 Hyde Park Boulevard, Niagara Falls, NY 14305****QC-IP Lab Technician**

- Conducted routine analysis supporting engineering and production on several dielectric and ceramic materials.
- Maintained control charts of product and calibration data.
- Completed maintenance and minor repairs of analytical instruments as needed.

Encore Photo Studios, Inc**09/1994 – 03/2004****2558 Niagara Falls Boulevard, Niagara Falls, New York 14304**

- **Professional Portrait Photographer / Supervisor / Management**
- Performed quality control, management, and training assuring continued growth and development of this photographic studio.
- Succeeded in tripling business during my tenure.
- Responsible for day-to-day operations, staff scheduling, payroll, and maintain positive client relationships.
- Collaborate with vendors and technical service departments to ensure customer requirements are met.