

Craig Charles Morris

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SUMMARY: Results-driven, detail oriented Engineer seeking employment in Process Engineering. Strongly adept at analytical problem solving, manufacturing process scale up and optimization, and client /coworker communication. Seeking full-time employment beginning in January, 2014.

EDUCATION

Colorado School of Mines, Golden, CO

Major: Chemical and Biochemical Engineering with Honors

GPA: 3.68/4.00

Minor: Biological Engineering and Life Sciences

WORK EXPERIENCE

Integrated Surgical Sciences, Sedalia, CO

Research and Development Engineer

05/10 - Present

- Formulated liquid and powder coating solutions to address specific customer requirements.
- Gathered and analyzed data to support patent claims. Performed physical testing of process equipment and products including viscosity, flow, pH, hardness. Statistically analyzed variance and reproducibility.
- Developed three projects from design to production. Successfully scaled up and optimized manufacturing processes by controlling input variables, automating process steps, and initiating quality protocols.
- Calculated price per unit costs and equipment costs to evaluate the economic feasibility of new projects.
- Effectively communicated business issues between customers and team members. Built and maintained standing relationships with a diverse customer base.

Quality Assurance Engineer

05/08 – 08/09

- Performed gauge repeatability and reproducibility studies to analyze coating processes. Reduced reject rate of manufacturing process by 70%.
- Implemented ISO 9000 & cGMP procedures to become compliant in production and manufacturing.
- Operated liquid and powder coating systems to apply biocompatible coatings on surgical instruments.
- Operated laser optic systems for masking solutions and laser micrometers for quality assurance.
- Performed fixturing and tooling using metal machining equipment.

Colorado School of Mines, Golden, CO

01/12 – 12/12

Professional Research Assistant

- Worked with a diverse team to design, synthesize, and analyze hydrogen permeable membranes fabricated using electroless plating techniques.
- Increased lifespan of membranes that separate hydrogen from syngas at 300-500 °C.
- Learned laboratory, techniques, safety, data analysis, waste disposal, and documentation methods.
- Provided reoccurring progress reports to direct supervisor on synthesis and data analysis.

RELEVANT EXPERIENCE

- **Biodiesel Production Team Leader:** Led a team to produce and analyze biodiesel using base-catalyzed transesterification of sunflower oil.
- **International Laboratory Technician:** Worked in Ghana Police Hospital as a laboratory technician. Independently ran electrophoresis, full blood count, Bacteriology, PCR, and liver/kidney function tests. Accra, Ghana. 04/13 – 07/13
- **Dialysis Project:** Designed, built and analyzed a dialysis experiment for undergraduate use in Field Session curriculum. Experiment was presented to the Colorado School of Mines - Chemical Engineering Assistant Department Head. 01/12 - 12/12.

- **Biochemical Engineering Senior Design Team Leader:** Designed an economically feasible device to detect and inactivate pathogens in blood. Explored lab-on-a-chip technology and a riboflavin/UV light processes. 01/12– 04/12.
- **Summer Field Session:** Worked in small teams to operate and analyze twelve chemical engineering experiments ranging from lab scale to pilot scale. Professional presentations and reports were presented to several Colorado School of Mines Chemical Engineering professors. 06/12-08/12.

PATENTS AND PUBLICATIONS

- US Patent 20120239068: An elastomeric biocompatible coating for a surgical scalpel blade that reduces friction and minimizes scarring. Patent filed: 12/11. Assigned to Ethicon Endo-Surgery 05/11.
- Publication comparing and contrasting the performance and stability of hydrogen permeable membranes synthesized using electroless plating techniques. Expected 07/13 in *Membrane Science*.

SKILLS

- Aspen, Solidworks, python, C++, Matlab, Mathematica, Polymath, and ChemBioDraw.
- Level gauges, T&P Sensors, Flowmeters, Laser system, Pumps, Conveyor belt, Fluid flow analysis.
- Proficient in Microsoft Word, Excel, Project, Outlook, PowerPoint, and Visio.
- Manufacturing techniques including waste disposal, inventory upkeep, and documentation procedures.
- Gas chromatograph, Mass spectrometer, Infrared spectromoter, NMR spectrometer
- Budgeting, scheduling, economic analysis, motion planning and programming, profit/cost analysis.
- Effective customer service techniques, analytical and problem solving skills, multi-tasking and fast pace P abilities, strong technical and operational skills, thrive in both independent and collaborative environments, great communication and interpersonal skills.

AWARDS AND HONORS

- The Harrison L. Hays 1931 Award - Outstanding Senior Award for scholarship, personality, and integrity of character. 12/12.
- Honors Undergraduate Research: Designed, built and analyzed a dialysis experiment for future undergraduate use in field session curriculum. 01/12 - 12/12.
- President's Undergraduate Scholarship: Competitive Academic Scholarship. 08/10 – 12/12.
- Dean's list: 08/09 –12/12.
- Eagle Scout: Eagle Project: Donation driven community service project. Built sensory stimulation kits for Castle Rock Care Center, Castle Rock, CO 06/06.

PROFESSIONAL MEMBERSHIPS

- Tau Beta Pi Engineering Honor Society: Attended bi-weekly meetings at the Colorado-alpha chapter. Participated in ten hours of community service each academic semester. Member since 08/11.
- National Society of Collegiate Scholars: An honors organization that recognizes and elevates high achievers. Member since 08/09.
- American Institute of Chemical Engineers: Attended bi-weekly seminars. Member since 08/10.

VOLUNTEERING

- American Red Cross Youth Preparedness Instructor: Teach emergency preparedness to classes of about 30 students. Teach 10 classes per month. 9/13-Present.
- Castle Rock Care Center: Built sensory stimulation kits for the elderly. Organized fund raising and managed a small group to help complete the project. 06/06.