

Munkhbayar Batmunkh
720.862.8336
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SKILLS

6" and 8" SiO₂, and Si wafers processing (lithography, hard etch, wet etch, etc.)
60-70nm patterns design, fabrication and characterization and testing.
Visible and UV optics components and devices design, implementation and set-up experience.
Visible and UV solid state and gas lasers use (with and without harmonic generation).
Multi- and single-mode fiber optic design, characterization, and use in research and data transmission.

QUALIFICATIONS

EDUCATION

National University of Mongolia **09/1991 - 07/1995**
Bachelor of Science - Optical Physicist
THESIS: "Fabrication of the nanolayer of metal dielectric by the method of evaporation in vacuum"

SUMMARY OF INDUSTRIAL QUALIFICATIONS

14 years of research and industrial experience
Experience in development, manufacturing and assembly of electronic circuit boards
Experience in design and characterization of various nanostructures
Experience in visible optical lithography and in UV lithography

TECHNICAL SKILLS

WIRE GRID POLARIZER PROCESSING TECHNIQUES

Optical an UV lithography
Deposition techniques including thermal oxidation, thermal and e-beam evaporation, Plasma Enhanced CVD and ICPECVD
Al, Al₂O₃, Si, SiO₂ wet and dry etching
Optical Ellipsometer and Electron Microscopy

WIRE GRID POLARIZER DEVICE TESTING

Optical and UV interferometry
Visible and UV Holographic patterning
Thermal longevity testing and Electrical Resistively testing

OPTICAL AND ELECTRONIC DEVICE TESTING

I-V photodiode and laser diode properties characterization (visible and UV)
Fiber optics transparency/absorption testing using LEDs and semiconductor lasers, spectrometers, photodiodes, photocells, CCDs, etc.

EXPERIENCE

COLDWELL BANKER Supervisor: Andy Sommer 303.437.1430 **11/2013 - Present**
141 Union Blvd. Unit 200, Lakewood, CO 80228
Residential Broker Associate Contracted

ASCENT SOLAR Supervisor: Matt Singer 720.972.5000 **02/2014 - 07/2014**
12300 N Grant ST, Thornton, CO 80241
Vacuum Deposition Technician Contracted
Operate, maintain, troubleshoot and repair thin film roll-to-roll processing equipment including vacuum deposition, CIGS and/or sputtering process equipment.

MUNKH INC., Consultant: Munkhbayar Batmunkh 720.862.8336 **11/2010 - Present**
1005 Golden Park Dr Unit B, Golden CO 80403

UNICIRCUIT Supervisor: 303.730.0505 **07/2010 - 10/2010**
8122 Southpark Ln, Littleton, CO 80120
Engineering Technician Contracted
Optical Inspection, Optical Measurement, Laser Drill, and/or LDI process, Coherent CO₂ lasers.

VARIAN MEDICAL SYSTEMS Supervisor: Jeff Adams 801.972.5000 **01/2007 - 01/2010**
1678 Pioneer Rd, Salt Lake City, UT 84107
Technician Test
Flat Panel Final Testing
PaxScan 1313, PaxScan 2020, PaxScan 2520, PaxScan 3030, PaxScan 4030CB, PaxScan 4336R and PaxScan 4343R.

ATHENA SOLUTIONS Supervisor: Steve Smith 801.266.2494 **07/2006 - 12/2006**
Qual Trax Place, Murray, UT 84107
Comcast Cable Installation Technician Contracted
Install Digital Telephone, Digital Cable, Internet, Run coaxial and telephone Cable, Install OPB and wall fishing
Troubleshoot wiring, signal levels and educate customers.

IBEW Supervisor: Dustin White 801.301.6236 **08/2005 - 06/2007**
3400 West 2100 South, Salt Lake City, UT 84104
Electrician Apprentice
Installing conduit, transformers, inside and outside electric wiring, wall fishing
Troubleshoot wiring problems, Color Coding

MOXTEK Supervisor: Paul Mills 801.863.8633 **12/2002 - 08/2005**
452 West 1260 North, Orem, UT 84058
Laser Patterning Engineering Technician
Developed and 6" wafer patterning to first 8" wafer size Wire Grid Polarizer (60-70nm).
Designed and fabricated Wire Grid Polarizer on 8" wafer using holographic patterning method.
Operated the following optical and semiconductor equipment: Deep UV Argon Lasers, SVG and Rite Track TEL Mark-8
coaters, Nimbus-300 NEXX plasma sputter, e-beam MARK-50 sputter, LAM hard etcher (6" and 8"), Zorbal
polarization analyzer, scanning electron microscope, N&K thin film ellipsometer, ZYGO interferometer, SRD wafer
dryer.
Performed: Deep UV lithography, LAM etching, Laser patterning and troubleshooting, Wet and Dry etching, Al, Pt,
Al₂O₃, SiO₂ coatings, Antireflective coatings, Negative and positive photoresist coatings, Characterization and Quality
Diagnostics of final Products using various optical and UV tools and equipment.

WOLF ELECTRONIX Supervisor: Jack Trent 801.802.7700 **08/2000 - 11/2002**
1176 South 1480 West, Orem, UT 84058
Operator and Electronic Assembler
Operated Robotic Surface Mount Technology soldering machines (0.64mm spacing), PSB washer, stamping
machine, etc.,
Performed Manual and robotic soldering, Clipping, PSB washing, etc
Tested Troubleshooting and quality control of Printed Circuit Boards, etc

ALPINE HEALTH INDUSTRIES Supervisor: Robert Davis 801.225.5525 **05/1999 - 08/2000**
1525 West Business Park Drive Orem, UT 84058
Manufacturing Operator
Encapsulating, Tabulating, Coating, Sorting and Packaging.

ACCOMPLISHMENTS

LIBRARY OF CONGRESS
Copyright "WHEN THE EARTH RUMBLER UNDER THE HOOVES" **Completed 11/2014**
Movie script based on **THE SECRET HISTORY OF MONGOLS.**
Co Author and Publisher

Co Author and Publisher - 60 Video Lessons. Based on Mongolian Grammar Textbook **Completed 10/2014**

LIBRARY OF CONGRESS
Copyright "MONGOLIAN GRAMMAR TEXTBOOK" **Completed 09/2009**
Mongolian Grammar for English users.
Co Author and Publisher

MILK JSC Supervisor: Toshil Bayarkhuu **09/1996 - 04/1999**
Sales Manager

PARLIAMENT OF MONGOLIA Senator: Bilegsaikhan Soyolsuren **11/1993 - 08/1996**
Assistant to Member of Parliament

Native speaker of Mongolian and Russian