

Gabriel A. Devenyi



PROFESSIONAL CONTACT Research Computing Associate
Computational Brain Anatomy Laboratory
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EDUCATION **McMaster University**, Hamilton, Ontario, Canada

Doctor of Philosophy — Engineering Physics **2009-05 – 2013-12**

- Defended 2013-12-09
- Thesis: An Investigation into the Role of Energy and Symmetry at Epitaxial Interfaces
- Degree Conferred 2014-06-11
- Adviser: Dr. John S. Preston

Masters of Applied Science – Engineering Physics **2007-05 – 2009-05**

- Transferred to Doctor of Philosophy Program
- Adviser: Dr. John S. Preston

Bachelor of Engineering with Distinction – Engineering Physics **2002-09 – 2007-05**

HONOURS AND AWARDS Nano Ontario 2011 Best Poster
McMaster Materials Science & Engineering 2010 Graduate Conference Best Presentation Delivery
Natural Sciences and Education Research Council of Canada Postgraduate Scholarship D3 — \$63,000
Ontario Graduate Scholarship — Doctoral — \$15,000 — Declined
Ontario Graduate Scholarship — Masters — \$15,000 — 2008
ELCAN Optical Technologies Student Scholarship — \$1500 — 2002, 2003, 2004
McMaster University Entrance Scholarship — \$1000 — 2002

CITATION METRICS Published Articles : 12
Total Citations : 119
h-index : 7
i10-index : 5
Average per article : 8

COMMERCIALIZATION

J. S. Preston, **G. A. Devenyi**, S. M. Jovanovic, “ARBITRARILY THIN ULTRA SMOOTH FILM WITH BUILT-IN SEPARATION ABILITY AND METHOD OF FORMING THE SAME”, *New International PCT Patent Application PCT/CA2013/050633*, 2013-08, Hamilton, ON, Canada

J. S. Preston, **G. A. Devenyi**, S. M. Jovanovic, “ARBITRARILY THIN ULTRA SMOOTH FILM WITH BUILT-IN SEPARATION ABILITY AND METHOD OF FORMING THE SAME”, *US Provisional Patent Application #61/683,317*, 2012-08, Hamilton, ON, Canada

TEACHING EXPERIENCE **Douglas University Mental Health Institute, CIC**, Montreal, Quebec, Canada

Research Computing Associate – CIC Software Seminar Series **2014-08 – Ongoing**
Presentation of practical hands-on courses in reproducible computing, cluster based computing, MR image processing for human and animal subjects, and statistical analysis of MR images.

McMaster University, Hamilton, Ontario, Canada

Sessional Lecturer – Introduction to Materials Science

2014-06 – 2014-08

Presentation of lecture material, preparation of assignments, quizzes and midterms. Marking and evaluation of student's work. Supervision and assignment of work to teaching assistants. Discussion of the role of the fundamental physics which determine the properties of materials, the varied properties of materials, and how those properties factor into the engineering design process.

McMaster University, Hamilton, Ontario, Canada

Co-Instructor – Engineering Physics 2CE4 Numerical Computation

2014-01 – 2014-04

Preparation of assignments, quizzes and occasional lecture material for newly developing course on numerical methods, with an eye towards practical problems encountered by Engineering Physics graduates in research and industry. Refinement of core curriculum based on feedback for future course incarnations.

Software Carpentry, Toronto, Ontario, Canada

Volunteer Instructor

2012-11 – Ongoing

Preparation and presentation of introductory computer science and engineering concepts to researchers in the sciences through multi-day workshops. Software Carpentry's aim is to teach researchers (usually graduate students) basic computing concepts and skills so that they can get more done in less time, and with less effort.

McMaster University, Hamilton, Ontario, Canada

Teaching Assistant — Senior Undergraduate Thesis Project

2008-09 – 2012-05

Management and supervision of senior undergraduate thesis laboratory used for competitive robotics project. Maintenance and teaching of electronics testing equipment, troubleshooting of electronics design including amplifiers, motor control, sensors and PCB design. Teaching and troubleshooting of embedded systems programming.

Teaching Assistant — Advanced Computer Laboratories

2008-09 – 2009-05

Management of hardware and software for advanced computer/hardware interaction laboratories. Instruction and troubleshooting of digital signal processing.

Teaching Assistant — Introduction to Solid State

2012-09 – 2012-12

Preparation of tests and assignments for students. Evaluation and marking of student tests and assignments. Management of class marks.

RESEARCH
EXPERIENCE

McMaster University, Hamilton, Ontario, Canada

Laboratory Manager

2009-05 – 2014-05

Design, construction and maintenance of laboratory equipment including computers, lasers, optical components, vacuum and gas systems, growth chambers and heaters. Instruction of new students on safety and operation of laboratory equipment.

Summer and Co-op Student Supervisor

2009-09 – 2014-05

Instruction, guidance and supervision of junior researchers on summer research positions. Training on laboratory safety and specific laboratory hazards.

Undergraduate Research Opportunities Summer Student

2003-05 – 2003-08

Repaired and upgraded undergraduate optical laboratory equipment. Re-implemented resistivity/hall effect characterization system from BASIC to LabVIEW.

PROFESSIONAL
EXPERIENCE

McMaster University – Electrical and Computer Engineering, Hamilton, Ontario, Canada

Programmer/Analyst

2014-02 – 2014-08

Technical support of computer, laboratory equipment and software for research. Design, setup and testing of software deployment on heterogeneous Linux-based supercomputing cluster for faculty and graduate student research using commercial optimization software and MATLAB. Instruction of graduate students on best practices in scientific computing. Provision and deployment of workstations for scientific computing.

Raytheon ELCAN Optical Technologies, Midland, Ontario, Canada

Optical Design Intern

2005-05 – 2006-08

Designed, specified tolerances and oversaw production of multi-element infrared and visible lens systems in ZEMAX and CodeV. Designed and oversaw production of opto-mechanical assembly of infrared imaging system for R&D evaluation of novel computationally assisted imaging technique for increased depth-of-field. Provided technical support for bid proposals and request for quote to sales and marketing.

Project Management Intern

2002-05 – 2002-08

Data mining of process flow bottlenecks of warranty and non-warranty products for repair. Automation of internal reporting systems using Microsoft Excel Visual Basic for Applications.

SERVICE

McMaster University, Ontario, Canada

Ex-Officio Member - Engineering Physics Graduate Advisory Committee

2013-12 – 2014-08

Boot-strapping of body intended to provide feedback and consultation between the Department of Engineering Physics regarding concerns and problems, and organization of graduate student events. Initial scheduling, draft of committee's mission statement and recruitment of current students to organize and participate in committee.

Nano Ontario, Ontario, Canada

Board Member At-Large - Chair, Communications Committee

2013-03 – 2015-01

Responsible for the crafting of communications strategies, through website, social media email and traditional media and the development and implementation of membership control and new members drive. Nano Ontario is a not-for-profit membership organization that represents the interests of academic, government, industrial, and finance community members in the development of nanotechnologies in Ontario.

Software Carpentry, Toronto, Ontario, Canada

Maintainer and Developer

2012-11 – Ongoing

Preparation and presentation of introductory computer science and engineering concepts to researchers in the sciences through multi-day workshops. Software Carpentry's aim is to teach researchers (usually graduate students) basic computing concepts and skills so that they can get more done in less time, and with less effort.

McMaster University, Hamilton, Ontario, Canada

Engineering Physics Professorial Search Committee

2010-11 – 2011-01

Organized and operated graduate round table to interview candidates and provided feedback to departmental chair.

Center for Inquiry, Toronto, Ontario, Canada

Committee for the Advancement of Scientific Skepticism

2010-10 – 2012-08

Research, writing and organizing of media releases, websites, and rallies with the purpose of informing the public and media regarding science and skepticism.

McMaster University, Hamilton, Ontario, Canada

NanoGiga 2009, 14th Canadian Semiconductor Technology Conference

2009-08

Evaluation of abstracts, production of conference materials, scheduling of sessions and technical logistics of sessions.

McMaster University, Hamilton, Ontario, Canada

Graduate Student Association – Phoenix Executive Committee

2009-09 – 2013-12

Oversight of finance, policies and procedures of GSA owned bar *The Phoenix*. Technical analysis and recommendation of point-of-sale system.

SKILLS

Research Skills

- Analytical Electron Microscopy — Sample preparation, High Resolution Scanning Electron Microscopy (SEM), Energy Dispersive Spectroscopy (EDS) and Electron Backscatter Diffraction (EBSD) for analysis of surfaces of materials.
- 2D X-ray Diffraction — Sample preparation, data collection schemes, single crystal refinement, unit cell determination, powder diffraction, and texture analysis for the analysis of crystalline materials.

- High Resolution X-ray Diffraction – Sample preparation, data collection schemes, lattice constant determination, rocking curves, strain determination and composition determination for the analysis of crystalline materials.
- Focused Ion Beam — Sample preparation, ion beam milling for cross sectional analysis, ion beam preparation of transmission electron microscopy samples, ion beam imaging for crystalline contrast analysis of multilayer thin films, nanostructures and microelectronic devices. Particular experience with FEI dual-beam FIB.
- Growth Systems — Sputtering, Pulsed Laser Deposition (PLD), Thermal Evaporation, and Molecular Beam Epitaxy growth of thin films, coatings and nanostructures
- Vacuum Systems — Wet and dry roughing, turbomolecular, and cryogenic pumping, and vacuum safe plumbing for high temperature high vacuum growth systems.
- Component fabrication — Design and specification of custom mechanical components for experiments, fabrication of simple mechanical components via machine shop facilities.
- Lithography — Sample preparation, spin on, computerized mask design, electron and optical lithography and development for contacts and electronic micro and nano structures and circuitry and micro-electro-mechanical (MEMS) fabrication.
- Electrical characterization — Four-point and van der Pauw resistivity, hall effect and IV curve characterization of semiconductors.
- General chemistry — Preparation and safe use of solvents, acids and bases for sample wet cleaning and processing.

Computer Skills

- Scientific Programming — C, MATLAB/Octave and Python, for numerical analysis of data, computation of models and simulation of physical phenomena.
- Embedded Programming — C and Assembly for communication with computers, sensors and other hardware and for automation of experiments.
- Software Automation — BASH scripting of file management and processing pipelines
- Laboratory Automation — LabVIEW and Python, for automation of laboratory experiments and data collection.
- Publishing — Microsoft Office, L^AT_EX, Inkscape, GIMP, GNUplot, SciDavis, and matplotlib for production of documents, figures, and graphs for publications.
- Modeling — VESTA (Visualization for Electronic and Structural Analysis), Mercury, and WinWULFF for modeling of atomic and crystal structures and for visualization.
- Organization — Mendeley (citation and reference management), and git (software revision control) for management of data, citation and software revisions and provenance of data and software.
- Commercial scientific Software — Bruker GADDS, Bruker APEX2, Bruker Multex, JEOL SEM software
- System administration — Windows and Linux workstation administration, Debian/Ubuntu/Centos workstation and server deployment, including user management, filesharing
- Linux-based compute clusters — Rocks Cluster cluster management distribution with Open/Son of Grid Engine
- Pipeline design — automation of processing of large datasets in a reproducible and parallel fashion for high throughput.

Image Processing Skills

- Preprocessing — denoising tools, bias field correction, common space registration using MINC/ANTs/ITK with a custom pipeline
- Voxel based morphometry — use of grey/white matter classification for statistical analysis of differences between groups, including state of the art modulation techniques using a custom pipeline
- Deformation based morphometry — Analysis of animal brain differences through group wise registration and deformation analysis with the pydpiper pipeline
- Cortex based analysis — Analysis of cortical thickness, surface area and gyrification across the cortex of human subjects through the CIVET pipeline
- Automated brain segmentation — Automated volumetric segmentation of animal and human whole-brain images using the MAgEbrain pipeline
- Subcortical Morphometry — Automated morphological analysis of subcortical brain regions using surface-based deformation and surface area analysis

G. A. Devenyi, M. Corvellec, J. F. Santos, D. Haine, “Software Carpentry – Skills for Scientific Computing”, *McGill University Physics*, 2015-01-10/11, Montreal, QC, Canada

J. D. Blischak, D. Haine, M. Corvellec, G. A. Devenyi, “Software Carpentry – Skills for Scientific Computing”, *Faculty of Medicine University de Montreal*, 2014-11-06/07, St-Hyacinthe, QC, Canada

G. A. Devenyi, “L^AT_EX for Preparation of Scientific Documents and Theses”, *McMaster Department of Electrical and Computer Engineering*, 2014-06-19, Hamilton, ON, Canada

G. A. Devenyi and J. Ory, “Software Carpentry – Skills for Scientific Computing”, *Cornell University Statistical Computing Unit*, 2014-06-04/05, Ithaca, NY, USA

G. A. Devenyi, “L^AT_EX for Preparation of Scientific Documents and Theses”, *McMaster Department of Medical Physics*, 2014-05-30, Hamilton, ON, Canada

G. A. Devenyi and G. Wilson, “Software Carpentry – Skills for Scientific Computing”, *McMaster University Department of Physics & Astronomy*, 2014-05-05/06, Hamilton, ON, Canada

G. A. Devenyi, “L^AT_EX for Preparation of Scientific Documents and Theses”, *McMaster School of Graduate Studies*, 2012-11/2013-05, Hamilton, ON, Canada

G. A. Devenyi, “The Future of Photovoltaics: Next Generation Materials and Devices at McMaster University Engineering Physics”, *IEEE Hamilton Chapter*, 2012-05, Hamilton, ON, Canada

G. A. Devenyi, “Optical Design and Engineering”, *Engineering Physics 3G03 — Optical Instrumentation*, 2008-10, Hamilton, ON, Canada

CONTRIBUTED
PUBLICATIONS

Vatcher, D., Sahakian, S., Chakravarty, M., **Devenyi, G. A.**, Saint-Martin, C., Rohlicek, C., Abda, A., Leone, O., Brossard-Racine, M.; “Subcortical Volumes and Psychosocial Outcomes in Young Adults with Congenital Heart Disease.” *McGill Medicine Student Research Day*, Montreal, Q.C., Nov. 11, 2016; Poster Presentation

Gabriel A. Devenyi, Raihaan Patel, Jurgen Germann, M. Mallar Chakravarty, “Structural trajectories of healthy aging in cortical thickness and subcortical morphometry”, *SfN Neuroscience 2015*, Presentation

Elisa Guma, Joanne Rocchetti, **Gabriel A. Devenyi**, Jason P. Lerch, G. Dal Bo, Blandine Courcot, M. Mallar Chakravarty, and Bruno Giros. “Brain volume changes following chronic antipsychotic treatment in animal models: MRI and histological study”, *SfN Neuroscience 2015*, Poster

J. Germann, R. Patel, **G. A. Devenyi**, M.M Chakravarty, “From M1 to Cerebellum: What effect does hand-preference have on the local volumes of motor related structures?”, *SfN Neuroscience 2015*, Poster

Daniel Gallino, Vincent Kong, **Gabriel A. Devenyi**, Axel Mathieu, M. Mallar Chakravarty, “Deep brain stimulation in mice using magnetic resonance imaging-compatible carbon electrodes”, *SfN Neuroscience 2015*, Poster

Vincent Kong, Raihaan Patel, **Gabriel A. Devenyi**, M. Mallar Chakravarty, Alzheimer’s Disease Imaging Initiative (ADNI), “Heterogeneity in neuroanatomical differences in relation to amyloid burden in mild cognitive impairment”, *SfN Neuroscience 2015*, Postter

Raihaan Patel, **Gabriel A. Devenyi**, Vincent Kong, M. Mallar Chakravarty, “Subcortical volume and morphology in Alzheimer’s disease and mild cognitive impairment”, *SfN Neuroscience 2015*, Poster

Alexandra Bedford, Min Tae M. Park, **Gabriel A. Devenyi**, Raihaan Patel, M. Mallar Chakravarty, “Left Lateralized Sexual Dimorphism in Cortical Thickness in Autism”, *SfN Neuroscience 2015*, Poster

Carley Miki, **Gabriel A. Devenyi**, Stephen Jovanovic, Jessica Carvalho, Kristoffer Meinander, Guozhen Zhu, John Preston, “Transfer of Epitaxial Thin Films to Carrier Substrates”, *APS March Meeting 2014*, Volume 59, Number 1

- Carley Miki, **Gabriel A. Devenyi**, Stephen Jovanovic, Jessica Carvalho, Kristoffer Meinander, Guozhen Zhu, John Preston, “Transfer of Epitaxial Thin Films to Carrier Substrates”, *Nano Ontario 2013 Conference*, 2013, Kingston, ON, Canada
- K. Meinander, **G. A. Devenyi**, S. M. Jovanovic, J. L. Carvalho and J. S. Preston, “High-quality detachable CdTe (111) heteroepitaxial films on α -Al₂O₃ (0001)”, *19th International Vacuum Conference*, 2013, Paris, France
- G. A. Devenyi**, S. Y. Woo, S. Ghanad-Tavakoli, R. N. Kleiman, J. S. Preston and G. A. Botton, “The Role of Crystallographic Tilt in the Accommodation of Strain During Thin Film Growth on (211) Substrates”, *Canadian Semiconductor Science and Technology Conference*, 2013, Thunder Bay, ON, Canada
- S. M. Jovanovic, V. Jarvis, **G. A. Devenyi**, K. Meinander, C. M. Happamaki, P. Kuyanov, M. Gerber, R. R. LaPierre and J. S. Preston, “Characterization of as-grown and free-standing single crystal CdTe films”, *Canadian Semiconductor Science and Technology Conference*, 2013, Thunder Bay, ON, Canada
- G. A. Devenyi**, S. M. Jovanovic, C. M. Haapamaki, V. M. Jarvis, P. Mascher and J. S. Preston, “Optical Properties of Epitaxial Single-Crystal CdTe Thin Films”, *The 2012 US Workshop on the Physics and Chemistry of II-VI materials*, 2012, Seattle, WA, USA
- S. M. Jovanovic, **G. A. Devenyi**, and J. S. Preston, “Lift Off of Epitaxial Single-Crystal CdTe Thin Films and Re-Use of Resulting Substrates”, *The 2012 US Workshop on the Physics and Chemistry of II-VI materials*, 2012, Seattle, WA, USA
- G. A. Devenyi**, S. M. Jovanovic, K. Meinander, J. Carvalho and J. S. Preston, “Production of Free Standing Single Crystal CdTe Thin Films and their Properties”, *Nano Ontario 2012 Conference*, 2012, Waterloo, ON, Canada
- S. M. Jovanovic, V. M. Jarvis, **G. A. Devenyi**, M. Gerber, C. M. Haapamaki, P. Kuyanov, R. R. LaPierre and J. S. Preston, “Optical Properties of Single Crystal CdTe Thin Films on (0001) Al₂O₃ Heteroepitaxial Templates”, *Nano Ontario 2012 Conference*, 2012, Waterloo, ON, Canada
- T. Majdi, **G. A. Devenyi** and J. S. Preston, “Controlling Size, Shape and Distribution of Epitaxially Driven Self Assembled Gold Nanostructures on MgAl₂O₄”, *Nano Ontario 2012 Conference*, 2012, Waterloo, ON, Canada
- J. L. Carvalho, K. Meinander, **G. A. Devenyi**, S. M. Jovanovic, and J. S. Preston, “A method for transferring epitaxially grown single crystal CdTe films from a sapphire substrate”, *Nano Ontario 2012 Conference*, 2012, Waterloo, ON, Canada
- S. M. Jovanovic, **G. A. Devenyi** and J. S. Preston, “A Novel Differential Hall Effect Profiling Technique for Buried Interfaces”, *Nano Ontario 2011 Conference*, 2011, Hamilton, ON, Canada
- S. Y. Woo, **G. A. Devenyi**, S. Hosseini Vajargah, S. Ghanad-Tavakoli, R. N. Kleiman, J. S. Preston and G. A. Botton, “Characterization of Defect Structure in Heteroepitaxy of GaSb/Si Thin Films for Photovoltaic Applications”, *13th Photonics North Conference*, 2011, Ottawa, ON, Canada
- G. A. Devenyi**, P. Mascher, and J. S. Preston, “Mesoscopic Self Assembly: The Intersection of Atomic and Continuum Physics in Metal on Oxide Systems”, *McMaster Materials Science & Engineering Graduate Student Conference*, 2010, Hamilton, ON, Canada
- S. Y. Woo, **G. A. Devenyi**, S. Tavakoli, R. N. Kleiman, J. S. Preston, and G. A. Botton, “Structure and Defects in Heteroepitaxy of Group III-V Compound Semiconductors Grown on Silicon”, *McMaster Materials Science & Engineering Graduate Student Conference*, 2010, Hamilton, ON, Canada
- S. Y. Woo, **G. A. Devenyi**, S. Tavakoli, R. N. Kleiman, J. S. Preston and G. A. Botton, “Structure and defects of epitaxial GaSb thin films grown on Si”, *Canadian Materials Science Conference*, 2010, Waterloo, ON, Canada
- G. A. Devenyi**, J. Li, R. A. Hughes, A. Shi, P. Mascher, and J. S. Preston, “A New Pathway to Plasmonic Nanostructures: Self Assembly via Strained Epitaxy and Surface Free Energy”, *Photonics North*, 2010, Niagara Falls, ON, Canada
- G. A. Devenyi**, J. Li, R. A. Hughes, A. Shi, P. Mascher, and J. S. Preston, “A New Pathway to Plasmonic Nanostructures: Self Assembly via Strained Epitaxy and Surface Free Energy”, *Nano Ontario*, 2010, London, ON, Canada

G. A. Devenyi, J. Li, R. A. Hughes, A. Shi, P. Mascher, and J. S. Preston, “Intricate epitaxial 3D gold nanostructures induced by lattice matched substrate”, *Center for Emerging Device Technologies Seminar Series*, 2008, Hamilton, ON, Canada

PEER-
REVIEWED
PUBLICATIONS

Robert SC Amaral, Min Tae M Park, **Gabriel A Devenyi**, Vivian Lynn, Jon Pipitone, Julie Winterburn, Sofia Chavez, Mark Schira, Nancy Lobaugh, Aristotle N Voineskos, Jens C Pruessner, M Mallar Chakravarty, Alzheimer’s Disease Neuroimaging Initiative, “Manual segmentation of the fornix, fimbria, and alveus on high-resolution 3T MRI: Application via fully-automated mapping of the human memory circuit white and grey matter in healthy and pathological aging”, *NeuroImage*, doi:10.1016/j.neuroimage.2016.10.027

R. Simpson, **G. A. Devenyi**, P. Jezzard and J. Near, “Advanced processing and simulation of MRS data using the FID Appliance (FID-A) - an open source, MATLAB-based toolkit“, *Magnetic Resonance in Medicine*, 10.1002/mrm.26091, 2015-12-30

S. M. Jovanovic, **G. A. Devenyi**, V. Jarvis, , C. M. Haapamaki, P. Kuyanov, M. Gerber, R. R. LaPierre, and J. S. Preston, “Optical Characterization of Epitaxial Single Crystal CdTe Thin Films on AL₂O₃ (0001) Substrates”, *Thin Solid Films*, Vol. 570, Part A, 155-158, 2014 doi:10.1016/j.tsf.2014.09.027

K. Meinander, J. L. Carvalho, C. Miki, J. Rideout, S. M. Jovanovic, **G. A. Devenyi**, and J. S. Preston, “Purified water etching of native oxides on single-crystal CdTe thin films”, *Journal of Physics D: Applied Physics*, Vol. 47, Num. 49, 495304 doi:10.1088/0022-3727/47/49/495304

M. M. Minnick, **G. A. Devenyi**, and R. N. Kleiman, “Optimum reactive ion etching of x-cut quartz using SF₆ and Ar”, *Journal of Micromechanics and Microengineering*, Vol. 23, Num. 11, 117002, 2013 doi:10.1088/0960-1317/23/11/117002

S. Y. Woo, **G. A. Devenyi**, S. Ghanad-Tavakoli, R. N. Kleiman, J. S. Preston and G. A. Botton, “Tilted Epitaxy on (211)-Oriented Substrates”, *Applied Physics Letters*, Vol. 102, Iss. 14, 2013. doi:10.1063/1.4799278

A. Sundar, R. A. Hughes, P. Farzinpour, K. D. Gilroy, **G. A. Devenyi**, J. S. Preston and S. Neretina, “Manipulating the Size Distribution of Supported Gold Nanostructures”, *Virtual Journal of Nanoscale Science & Technology*, Vol. 25, Iss. 4, 2012. doi:10.1063/1.3675569

A. Sundar, R. A. Hughes, P. Farzinpour, K. D. Gilroy, **G. A. Devenyi**, J. S. Preston and S. Neretina, “Manipulating the Size Distribution of Supported Gold Nanostructures”, *Applied Physics Letters*, Vol. 100, Iss. 1, Num. 013111, 2012. doi:10.1063/1.3675569

A. P. Yuen, S. M. Jovanovic, A. Hor, R. A. Klenkler, **G. A. Devenyi**, R. O. Loutfy, and J. S. Preston, “Photovoltaic Properties of M-Phthalocyanine/Fullerene Organic Solar Cells”, *Solar Energy*, Vol. 86, Iss. 6, Num 1683-1688, 2012 doi:10.1016/j.solener.2012.03.019

G. A. Devenyi, S. Y. Woo, S. Ghanad-Tavakoli, R. A. Hughes, R. N. Kleiman, G. A. Botton and J. S. Preston, “The Role of Vicinal Silicon Surfaces in the Formation of Epitaxial Twins during the Growth of III-V Thin Films”, *Journal of Applied Physics*, Vol. 110, Iss. 12, Num. 124316, 2011. doi:10.1063/1.3671022

G. A. Devenyi, J. Li, R. A. Hughes, A. Shi, P. Mascher, and J. S. Preston, “Epitaxially Driven Formation of Intricate Supported Gold Nanostructures on a Lattice-Matched Oxide Substrate”, *Nano Letters*, Vol. 9, Iss. 12, pp 4258–4263, 2009. doi:10.1021/nl902491g

S. Neretina, R. A. Hughes, **G. A. Devenyi**, N.V. Sochinskii, J. S. Preston, and P. Mascher, “Atypical grain growth for (211) CdTe films deposited on surface reconstructed (100) SrTiO₃ substrates”, *Applied Surface Science*, Vol. 255, Iss. 11, pp 5674-5681, 2009. doi:10.1016/j.apsusc.2008.12.050

S. Neretina, R. A. Hughes, **G. A. Devenyi**, N.V. Sochinskii, J. S. Preston, and P. Mascher, “The role of substrate surface alteration in the fabrication of vertically aligned CdTe nanowires”, *Nanotechnology*, Vol. 19, Iss. 18, Num. 185601, 2008. doi:10.1088/0957-4484/19/18/185601