

GRANTS (run through IMS)

United Technologies Aerospace Systems – Center of Excellence, Pamir Alpay, (PI and Director, with R.J. Hebert, M. Aindow, S.L. Suib, 2/1/16 – 1/31/2021 United Technologies Corporation Aerospace Systems, \$1,000,000

Metals and Alloys for Electrical Circuit Breaker Contacts, PI: Pamir Alpay, with M. Aindow, 1/01/13 - 1/01/17, GE Industrial Solutions, \$820,800

Computation of Gas Dynamics and Measurement of Gas Temperature in Low Voltage Circuit Breakers, Yang Cao, General Electric Company, \$133k/2015, \$100k/2016

Promotion of Ethylene-Propylene Rubber Cable Technology, Yang Cao, 11/01/98 - 12/31/18, Exxon-Mobil, ECC, Kerite, Okonite, Lion-Copolymer, \$2,133k

Subsea High Voltage Direct Current Connectors for Environmentally Safe and Reliable Powering of UDW Subsea Processing, Yang Cao, 10/01/14 - 06/30/16, DOE/Department of Energy, DOE (12121-6302-01), \$158k

Nanostructured Dielectric Insulation for High Power Density Next Gen Propulsion Motor, Yang Cao, 05/15/2015 – 05/14/2019, ONR (N00014-15-1-2413), \$600k

Improved Accessory Designs, Yang Cao, 01/11/2015 – 10/30/2015, Underground System, Inc., \$90k

Inclined Plane and PD Test, Yang Cao, 05/21/2015-10/30/2015, Eaton, \$7.5k

Investigation of Feeder Samples, Yang Cao, 8/5/2015-11/5/2015, Underground System, Inc./Con-Ed, \$30k

Investigation of New Dielectric Fluid as SF6 alternative (Phase 1), Yang Cao, 03/24/2016 – 3/14/2017, G&W Electric., \$30k

Metal Oxide Nano-array based Catalysts for Low Temperature Diesel Oxidation Puxian Gao, 10/1/14-8/31/17, DOE, \$1,450,000

SNM: Scalable and Sustainable Hydrothermal Manufacturing of Nano-array based Low Temperature Diesel Oxidation Catalysts, Puxian Gao, 10/1/13-9/30/17, NSF, \$1,450,199

GRANTS (run through IMS)

Metal Oxide/Nitride Heterostructured Nanowire Arrays for Ultra-Sensitive and Selective Multi-Mode High Temperature Gas Detection, **Puxian Gao**, 7/17/13-6/30/16, DOE, \$300,000

Manufacturing of Ultra-efficient and Robust Nano-array based Lean NOx Trapping Devices, **Puxian Gao**, 9/1/2015-4/30/2016, subaward through 3D Array Tech. (EPA), \$33,322

Synthesis of Inorganic Nanostructures as Field Emitters, **Puxian Gao**, 6/4/2007-12/31/2015, UTRC, \$162,322

Characterization of additively manufactured parts, **Rainer Hebert**, 3/15/15 - 12/31/15, UTAS, \$30,000

Additive Manufacturing of Aluminum, **Rainer Hebert**, 10/1/15 - 3/31/16, UTAS, \$42,000,

Alloy development for additive manufacturing, **Rainer Hebert**, 11/1/15 - 4/30/16, UTAS, \$48,000

High Speed SPM, **Bryan Huey**, 10/2011 – 9/2015, DOE-BES-ESPM, \$450K

AFM of Myocardial Cell Nanomechanical Signaling, **Bryan Huey**, 9/2014 – 8/ 2017, NSF-CMMI-CBET, \$150K

AFM of Semiconductor Devices, **Bryan Huey**, 9/2015 – 8/ 2016, Industry Sponsor, \$20K

Muscle-Cell Based Information Processing, **Bryan Huey**, 9/1/14 - 8/31/16, U of Notre Dame-NSF \$110,319

Switching in Solid State Memories Via Nucleation and Growth Mechanisms: Cause and Effect at the nanometer and Nanosecond Scale, **Bryan Huey**, 8/15/10-5/14/15, DOE, \$560,000

Multiferroicity in Perovskite-Type Rare-Earth Manganites, **Menka Jain**, 6/1/13 – 8/31/17, National Science Foundation grant (DMR, continuing), \$272,987

DNA Floor Boards, **Challa Kumar**, 8/1/14 – 7/31/17, NSF EAGER, \$174,000

GRANTS (run through IMS)

Cold Spray of Aluminum Alloys: Characterization, Measurement and Modeling, **Seok-Woo Lee**, Co-PI (with Mark Aindow, PI), 9/1/15 – 8/31/16, Army Research Laboratory, \$225,000

In-situ Investigations of Thermally-Activated Processes Using MEMS Devices, **Seok-Woo Lee**, Co-PI (with Mark Aindow, PI), 7/15/15 – 6/30/16, FEI, \$110,000

In-Silico Solid Form Design, **Serge Nakhmanson**, 8/23/15 – 8/22/17, Pfizer Inc., \$137,200

Human intestine model printing, Co-PI: **Anson Ma**, PI: Kelly Burke, 9/1/15 - 8/31/17, CT Regenerative Medicine Fund, \$200,000

Printing sensor, **Anson Ma**, 8/31/15 - 4/9/16, UTRC, \$17,000

3D printing polymers, **Anson Ma**, 7/1/15 6/30/16, TE Connectivity, \$70,000

GAANN: *Polymer*, Named Investigator: **Anson Ma**, PI: Luyi Sun, 9/1/15 - 8/31/18, Department of Education Named Investigator, \$738,195

Additive Manufacturing of Flexible Sensors for Aerospace Structures, **Anson Ma**, 8/29/15 - 6/30/16, NASA CT Space Grant, \$10,000

In-Silico Solid Form Design, **Serge Nakhmanson**, Pfizer Inc, 8/23/2015 - 08/22/2017 \$137,200

Signal-Amplification for Instrument-Free, Multiplexed Immunoassay – a Generalized Platform for Biosensing, **Mu-Ping Nieh**, NSF-CBET, 6/1/2015 – 5/31/2018, \$300,413

NSF EAGER: The Effects of Molecular Architectures on Lipid-Based Nanoparticulate Interaction through Polymer Linkers, **Mu-Ping Nieh**, 6/1/2014 – 11/30/16, NSF, \$149,000

GAANN: *Multi-functional Polymer Based Materials – Derived and Learned from Nature*, **Mu-Ping Nieh**, 9/1/15 – 8/31/2018, Department of Education, \$738,195

Single-Step Manufacture of Affinity Nanodiscs for Drug Delivery, **Mu-Ping Nieh**, 1/1/12 – 12/31/15, NSF, \$387,249

GRANTS (run through IMS)

Moderna Therapeutics Sponsored Research Agreement, **Mu-Ping Nieh**, Moderna Therapeutics, 3/8/16 – 3/7/17, \$84,000

Fluorite-Structured Oxides: A New Class of Multifunctional Materials, **George Rossetti**, 9/15/15 - 9/14/18, DoD/Army Research Office, \$240,000

Formation, Dynamics, and Applications of Ultracold Molecules, **William C. Stwalley**, 9/1/12 – 8/31/16, NSF, PHY-1208317, \$460,000

Formation, Dynamics, and Applications of Ultracold Molecules, **William C. Stwalley**, 9/1/15 – 8/31/18, NSF, PHY-1506244, \$460,000

Hydrothermal Manufacturing of Nano-array based Low Temperature Diesel Oxidation Catalysts, \$1,450,199.00, P. Gao PI, **Steven Suib** Share \$225,000, NSF, 10/01/13 - 09/30/17

Metal Oxide Nano-Array Catalysts, \$1,210,000, P Gao, PI, **Steven Suib** Share, \$216,000, DOE, 9/30/14 – 5/31/16

Porous Solid Electrolytes for Advanced Lithium Ion Batters, **Steven Suib**, 8/13/14 – 12/31/16, CIA, \$240,000

Thin Film Coatings, **Steven Suib**, 4/1/14 – 3/31/15, General Electric, 2%, \$100,000

Ceramic Oxide Coating, **Steven Suib**, 1/1/14 – 12/31/15, General Electric, \$154,616

Conductive Ceramic Coatings, **Steven Suib**, 1/16 – 12/31/16, General Electric, \$100,000

Alloy Materials, **Steven Suib**, 1/1/16 – 12/31/16, UTRC, 2%, \$30,000

Aligned nano-Coating Trials of Polyurethane Films and Polyurethane Coated Test Articles, **Luyi Sun**, United Technologies Research Center, 04/01/2015 - 04/30/2015 \$6,000

IFSEEN-Integrating Food Science/Engineering & Education Network: An Educational Linkage to Collaboratively Generate Future Hispanic Food Safety/Science Professionals and Leaders, **Luyi Sun**, 11/01/2015 - 10/30/2019, USDA, \$40,000

GRANTS (run through IMS)

Multi-functional Polymer Based Materials – Derived and Learned from Nature, **Luyi Sun**, PI (with Mu-Ping Nieh and Rajeswari Kasi as co-PIs), 09/01/2015 - 08/31/2018, Department of Education, \$738,195 (+\$228,518 matching),

Multi-functional Hybrid Thin Films with a Well-aligned Microstructure through Flow-Induced Orientation, **Luyi Sun**, PI (with M. Shaw as co-PI), 06/01/2016 - 05/31/2019, NSF, \$355,920

Publication in Nature Communications, a Premium Open-access Journal for Maximum Impact, **Luyi Sun**, 01/01/2016-06/30/2016, Scholarship Facilitation Fund Awards, \$1,000

EAGER: Fabrication of self-powered scaffolds for enhanced bone repair, **Mei Wei**, 9/1/13 – 8/31/16, NSF, \$236,673

Repair and regeneration of osteochondral defects in mouse articular joints, **Mei Wei**, 9/1/11 – 8/31/16, NSF, \$311,123

PFI:AIR-TT: Prototyping bioabsorbable composites for bone-fixation applications involving low to medium loads, **Mei Wei**, 5/1/14 – 10/31/16, NSF, \$200,000

Investigation of porous biomimetic ceramic coating on a metallic substrate using FIB, **Mei Wei**, 7/1/15 – 6/30/16, FEI, \$100,000