

FY 2014 Approved LDRD Projects

Directorate	Dept	Investment #	Project Description	Principal Investigator
BES	CO	LDRD13-013	Electrochemical reduction of carbon dioxide on surface-modified metal electrodes	Polyanskiy,Dmitriy E
BES	CO	LDRD13-038	Catalysis Program in Sustainable Fuels	Harris, A
BES	CO	LDRD14-035	Operando studies of C1 catalytic reactions: Probing model and technical catalysts at high pressures using soft x-rays	Rodriguez,J/Sutter,P
BES	NC	LDRD14-036	Correlative microscopy, spectroscopy and diffraction with a micro-reactor	Stach,E/Frenkel,a
BES	PM	LDRD12-007	Complex Modeling: Leveraging Advanced Scattering Data with Computation to Push Back the Materials Complexity Frontier	Billinge,SJL
BES	PM	LDRD14-037	Imaging Electronic Texture in High-Temperature Superconductors	Wilkins, S.
EBC	BO	LDRD12-012	Inter-individual var in radiation induced epig	Wilson Jr,Paul F
EBC	BO	LDRD13-020	Synthetic Control of Lipid Biosynthesis in Plant Vegetative Tissue	Shanklin,John
EBC	BO	LDRD14-026	Increasing efficiency of nitrogen use by plants: a prerequisite for bioenergy crops on marginal lands	Maslov,S/Qu,W
EBC	BO	LDRD14-028	Tissue-specific metabolic models in plants	Schwender,J
EBC	CC	LDRD13-017	NSLS-II Workflow Prototype System	Yu,Dantong
EBC	CC	LDRD14-024	Enable Early Sciences in NSLS-II with Experiment-Driven Big Data Stream System	Harrison,R/Dalesio,L
EBC	EE	LDRD12-015	Ecosystem model	Wu,Wei
GARS	NE	LDRD13-027	In-situ Studies of Interfaces Under Extreme Environments	Gill,Simerjeet K
GARS	NN	LDRD14-003	Boron Arsenide (B12As2) Thin Films for Next-Generation Thermal Neutron Detectors	Cui,Y/James,R
GARS	ST	LDRD12-024	Thermochemical Conversion of Biomass to Fuels and Chemicals	Babu,Suresh P
GARS	ST	LDRD12-025	Flow-Based Battery Architectures for Large-Scale Electrical Energy Storage	Erdonmez,Can K
GARS	ST	LDRD13-022	Tracking lithium electrochemical reaction in individual nanoparticles at NSLS-II	Wang,Feng
GARS	ST	LDRD13-024	Elucidating the Role of Nanostructured Domains in CIGS PV Device Performance	Eisaman,Matthew
GARS	ST	LDRD13-025	A Probabilistic Approach to Sizing Battery Energy Storage Systems for Improved Grid Inertial Response	Wang,Xiaoyu
NPP	AD	LDRD12-032	Laser-Driven Proton Accelerator	Pogoreslsky,Igor
NPP	AD	LDRD13-003	Investigating eRHIC beam-beam effects with CeC linear accelerator	Litvinenko,Vladimir
NPP	AD	LDRD13-005	Permanent magnet solution of the eRHIC with the NON-SCALING FFAG	Trbojevic,Dejan
NPP	AM	LDRD14-011	High Performance Direct Winder Superconducting Magnets	Parker, B
NPP	IO	LDRD10-040	Dvlpmnt of Laser Systm for EIC	Rao,Triveni
NPP	PO	LDRD11-033	Exploring the Role of Glue in Hadron Structure by an Electron Ion Collider	Qiu,Jianwei
NPP	PO	LDRD11-036	CMOS-Pixel Vertex Detector for EIC	Aschenauer,Elke C
NPP	PO	LDRD12-033	Water-based Liquid Scintillator Detector for Neutrino and Proton Decay Experiments	Jaffe,David E
NPP	PO	LDRD12-034	Quantum Electrodynamics for QCD Precision Studies at the EIC	Stratmann,Marco
NPP	PO	LDRD13-006	Time resolved imaging of X-rays and charged particles	Nomerotski,Andrei
PS	PS	LDRD11-008	Touchless Micro-Crystallography	Soares, A.S.
PS	PS	LDRD12-018	Conical Slit for Probing Buried Micron or Sub-Micron Volumes for Dynamic Measurements of Heterogeneous	Margulies,Lawrence
PS	PS	LDRD12-021	In-Situ Transmission X-Ray Microscopy Studies of Structure and Function in Energy Storage	Wang,Jun
PS	PS	LDRD12-022	MeV-UED for Ultrafast Science	Wang, Xijie
PS	PS	LDRD12-023	Femto-Second X-ray Pulse Generation by Electron Beam Slicing	Yu,Li Hua
PS	PS	LDRD13-031	Modulation Enhanced Diffraction: a new tool for powder diffraction and total scattering studies	Dooryhee,Eric Y
PS	PS	LDRD13-032	Development of At-Wavelength Metrology Tools	Idir,Mourad
PS	PS	LDRD13-033	Multidimensional imaging data analysis: from images to science	Lee,Wah-Keat
PS	PS	LDRD13-034	Atomic resolution elemental mapping using x-ray assisted STM	Nazaretski,Evgeny
PS	PS	LDRD14-021	In-situ investigation of the strain distribution in next-generation 3D transistors using x-ray nanodiffraction	Yan,H

LDRD Projects with Delayed Starts				
Directorate	Dept	Investment #	Project Description	Principal Investigator
BES	NC	LDRD14-032	Nanoconfined Polymer Electrolytes for Rechargeable Lithium-Metal Batteries	Black, C.
BES	NC	LDRD14-033	Revealing the Structure and Dynamics of Discrete Meso-Architectures	Gang, O.
EBC	BO	LDRD14-027	A Systems-Level Study of the Responses of Setaria Viridis Grass to Growth Promoting Associations Involving Rhizobacteria.	Ferrieri, R.
GARS	NE	LDRD14-005	1st Light: Elucidating Solid-Solid Interfaces in Energy Storage Systems	Takeuchi, E.
NPP	PO	LDRD14-013	Extracting fundamental QCD physics from novel measurements with hard probes at eRHIC	Qiu, J./Venugopalan, R.
NPP	PO	LDRD14-039	Placeholder for NPP Proposal - Exploring the glue by heavy quarkonium production at an Electron Ion Collider	Qiu, Jianwei
PS	PS	LDRD11-008	Touchless Micro-Crystallography	Soares,A.S.
PS	PS	LDRD13-036	Segmented Adaptive-Gap Undulator with different period lengths in segments for production of high flux and brightness Hard x-rays at NSLS-II	Tchoubar,O
PS	PS	LDRD14-016	Inelastic X-Ray Scattering determination of the inter- and intra-particle dynamics of nanoparticle superlattices: key to the development of THz phononic crystals	Cunsolo, A.
PS	PS	LDRD14-019	Diffraction Extinction Based TXM for In-situ Imaging of Catalyst Microparticles with Crystalline Nanostructures	Wang, Jun
PS	PS	LDRD14-022	Femto-Second X-ray Pulse Generation by Electron Beam Slicing	Hua, L./Shaftan, T/Willeke, F.