2013

1. Rozaliya **Barabash**, Christoph Kirchlechner, Odile Robach, Olivier Ulrich, Jean-Sébastien Micha, Alexei Sozinov and Oleg Barabash, "In-Situ Observation of Stress-Induced Stochastic Twin Boundary Motion in off Stoichiometric NiMnGa Single Crystals", Appl.Phys.Let. **103**, 021909 (2013).

2. Leyun Wang, **Rozaliya Barabash,** Thomas Bieler, Wenjun Liu, and Philip Eisenlohr, "Study of {11-21} twinning in α-Ti by EBSD and Laue Microdiffraction" Met Mat Trans A **44A,** 3664-3674 (2013).

3. Leyun Wang, Meimei Li, Jonathan Almer, Thomas Bieler, and **Rozaliya Barabash** "Microstructural characterization of polycrystalline materials by synchrotron X-rays", Front. Mater. Sci. **7 (2)**: 156-169 (2013).

4. **R. I. Barabash,** A. Rollett, R. A. Lebensohn, O. M. Barabash, W. Liu, J.W.L. Pang "Twin boundary induced intrinsic strengthening in Ni", Thin Solid Films, **530** 14-19 (2013).

5. Marina Suominen Fuler, **Rozaliya Barabash**, Stewart McIntyre, Sridhar Ramamurthy, and Wenjun Liu "Assessment of plastic deformation induced by indentation on a large grain on Inconel 600 using synchrotron polychromatic X-ray microdiffraction" Met Mat Trans A **44A** #1, 17 -21 (2013).

6. **Rozaliya I Barabash** "Diffraction across the length scale" *JOM*, 65, #1, 18 - 20 (2013).

7. Zhenzhen Yu, **Rozaliya Barabash**, Oleg Barabash, Wenjun Liu, Zhili Feng "Microscopic Deformation in Individual Grains in an Advanced High-Strength Steel", *JOM*, 65, #1, 21 - 28 (2013).

8. N.S. McIntyre, **R.I. Barabash**, J. Qin, M. Kunz, N. Tamura, H. Bei, "Acquisition, Sharing and Processing of Large Datasets for Strain Imaging: an Example of an Indented Ni_3Al/Mo Composite", *JOM*, 65, #1, 29 - 34 (2013).

9. **R.I. Barabash**, Xun-Li Wang, G. Kostorz, B. Fultz, L. Levine, P.K. Liaw " Neutron and X-ray Studies of Advanced Materials V- Diffraction Centennial" Met Mat Trans A, **44A,** #1, **15-16** (2013).

2012

1. **R.I. Barabash,** W. Liu, J.Z. Tischler, H. Bei, J.D. Budai, "Phase-specific elastic/plastic interface interactions in layered NiAl–Cr(Mo) structures", *Acta Mater*., 60 (2012) 3279–3286.

2. **R.I. Barabash,** G.E. Ice, E.A. Karapetrova, P. Zschack „Stress annealing induced diffuse scattering from Ni_3 (Al, Si) precipitates", MMTA **43A** 1413-1422, 2012.

3. E-Wen Huang, **Rozaliya I. Barabash**, Bjørn Clausen, and Peter K. Liaw "Cyclic-loading Induced Lattice-Strain Asymmetry in Loading and Transverse Directions", MMTA **43A** 1454-1461, 2012.

   a. 2011

4. L.L. Zheng, Y.F. Gao, S.Y. Lee, **R.I. Barabash**, J.H. Lee, P.K. Liaw "Intergranular strain evolution near fatigue crack tips in polycrystalline metals", Journal of the Mechanics and Physics of Solids, **59** 2307–2322 (2011).

5. Y. Yang, L. Wang, C. Zambaldi, P. Eisenlohr, **R. Barabash**, W. Liu, M.R. Stoudt, M.A. Crimp, and T.R. Bieler, „Characterization and modeling of heterogeneous deformation in commercial purity titanium" , *JOM*, **63**, #9, 66-73 (2011).

6. **R. I. Barabash**, H. Bei, Y. F. Gao, G. E. Ice, "Interface Strength in NiAl-Mo Composites from 3D X-ray Microdiffraction", *Scripta Mater*., **64**, 900-903 (2011).

7. **R. I. Barabash**, H. Bei, G. E. Ice, Y. F. Gao, O.M. Barabash, "3D X-ray Strain Microscopy in Two-Phase Composites at Submicron Length Scale", *JOM*, **63**, #3, 30-34 (2011).

8. L. Wang, **R. Barabash**, Y. Yang, T.R. Bieler, M.A. Crimp, P. Eisenlohr, W.J. Liu, G.E. Ice, "Experimental characterization and crystal plasticity modeling of heterogeneous deformation in polycrystalline α-Ti", *Met Mat Trans A* **42A** 626-635 (2011).

9. **R.I. Barabash** "Small scale materials behavior from X-ray microdiffraction and imaging: part II", *JOM*, Vol. 63, #7, 60 (2011).

10. **R.I. Barabash**, J. Tiley, Y.D. Wang, P.K. Liaw, E. Lilleoden, "Foreword: Neutron and X-Ray Diffraction Studies of Advanced Materials", Met Mat Trans A, **42A,** #1, 4-5 (2011).
11. T.R. Bieler, **R.I. Barabash,** S.W. Banovic, "Foreword: Structural transitions and local deformation processes at and near grain boundaries", Met Mat Trans A, **42A,** #3, 553 (2011).

2010

1. **R. I. Barabash,** H. Bei, Y. F. Gao, G. E. Ice, "Indentation-induced Localized Deformation and Elastic Strain Partitioning in Composites at Submicron Length Scale", *Acta Mater.,* **58**, 6784-6789 (2010).

2. O. M. Barabash, M. Santella, **R.I. Barabash**, G. E. Ice, J. Tischler, "Measuring Depth-dependent Dislocation Densities and Elastic Strains in an Indented Ni-based Superalloy", *JOM*, **62**, #12, pp.-29-34 (2010).

3. **R.I. Barabash,** E-Wen Huang, James J. Wall, James H. Wilkerson, Yang Ren, Wenjun Liu, Sven C. Vogel, Gene E. Ice, Lee M. Pike, and Peter K. Liaw, "Texture Crossover: Trace from Multiple Grains to a Subgrain*" Mat Sci Eng*. A **528**, 3-10, (2010).

4. **R.I. Barabash,** Y.F. Gao, G.E. Ice, O.M. Barabash, Jin-Seok Chung, W. Liu, R. Kröger, H. Lohmeyer, K. Sebald, J. Gutowski, T. Böttcher, D. Hommel, "Mapping Strain Gradients in the FIB-Structured InGaN/GaN Multilayered Films with 3D X-ray Microbeam", *Mat. Sc. Eng*. A **528**, 52 - 57, (2010).

5. Charo I. Del Genio, Kevin E. Bassler, Alexander L. Korzenevskii, **Rozaliya I. Barabash,** Johann Trenkler, George F. Reiter, Simon C. Moss, "Depth-dependent ordering, two-length-scale phenomena, and crossover behavior in a crystal featuring a skin layer with defects", *Phys. Rev. B*. **81,** 144111-1 -144111-10, (2010).

6. E-Wen Huang, **Rozaliya I. Barabash**, Gene E. Ice, Bjørn Clausen, Yee-Lang Liu, Ji-Jung Kai, Kyle P. Woods, and Peter K. Liaw, "Fatigue-induced Reversible/Irreversible Structural-transformations In a Ni-based Superalloy", *International Journal of Plasticity*, **26**, 1124-1137 (2010).

7. **R. I. Barabash**, H. Bei, Y. F. Gao, G. E. Ice, and E. P. George, "3D X-ray Microprobe Investigation of Local Dislocation Densities and Elastic Strain Gradients in a NiAl-Mo Composite and Exposed Mo Micropillars as a Function of Pre-strain", *JMR* **25,** 2, 199-206, (2010).

8. **R.I. Barabash,** G.E. Ice, "Local and near surface structure from diffraction", Mat Sci Eng A 528, 1-2 (2010).

9. **R.I. Barabash,** J. Tischler, G. E. Ice, O.M. Barabash. "Small Scale Mechanical Behavior and Interface strength in Ni-Mo Composites from 3D X-Ray Microdiffraction", in: 31st Risø International Symposium on Materials Science; Challenges in Materials Science and possibilities in 3D and 4D techniques, conference proceedings, Riso, Roskilde, Denmark, pp.1-9, 2010.

10. **Rozaliya I. Barabash,** Jaimie Tiley, Yandong Wang and Peter K. Liaw, "Neutron and X-Ray Studies of Advanced Materials" (Foreword), Metallurgical and Materials Transactions A: Volume 41, Issue 5 (2010) , Page 1109.

11. **Rozaliya I. Barabash**, E-Wen Huang, Bjørn Clausen, Wenjun Liu, Gene E. Ice, and Peter K. Liaw ,"Multiscale diffraction study of reversible/irreversible deformation mechanisms in the nickel-based superalloy during fatigue", 2010, Proceedings of PLASTICITY '10':The 16th International Symposium on Plasticity and its Current Applications, January 3 – 8, 2010, Eds. A.S. Khan and B. Farrokh, NEAT PRESS, 25-27, (2010).

12. **R.I. Barabash, G.E. Ice,** „Small scale materials behavior from X-ray microdiffraction and imaging", *JOM*, Vol. 62, #12, 21 (2010).