

## [IT-7. In-situ microscopic techniques and cryo-microscopy](#)

8 September, 17:00 - 19:00 / 9 September, 16:30 - 18:30

### **IT-7-P-1394**

#### **An in-situ transmission electron microscopy study on room temperature ductility of TiAl alloys with fully lamellar microstructure**

Presenting author: **Kim S.**

*Authors: Kim S., Na Y., Yeom J., Kim S.*

### **IT-7-P-1582**

#### **Simultaneous in situ SEM/STEM observation of catalyst reaction under an air atmosphere using a Cold-FE environmental TEM**

Presenting author: **Sato T.**

*Authors: Sato T., Matsumoto H., Nagaoki I., Yaguchi T.*

### **IT-7-P-1610**

#### **Observation method of cross-sectioned cells by cryo-scanning electron microscopy**

Presenting author: **Nishino Y.**

*Authors: Nishino Y., Ito Y., Miyazawa A.*

### **IT-7-P-1655**

#### **Characterization of Melting and Crystallization Behavior in the Au-Ge Eutectic System Using Au-catalyzed Ge Nanowires**

Presenting author: **Marshall A. F.**

*Authors: Marshall A. F., Thombare S. V., Chan G., McIntyre P. C.*

### **IT-7-P-1721**

#### **Maestro: a Matlab-based centralized computer control system for an electron microscopy laboratory**

Presenting author: **Malac M.**

*Authors: Bergen M., Dalili N., Malac M., Hoyle D., Chen J., Taniguchi Y., Yotsuji T., Yaguchi T., Hayashida M., Howe J., Kupsta M.*

### **IT-7-P-1812**

#### **Dislocation mediated creep/relaxation in nanocrystalline palladium thin films revealed by on-chip high resolution TEM in-situ testing**

Presenting author: **Amin-Ahmadi B.**

*Authors: Amin-Ahmadi B., Colla M. S., Idrissi H., Malet L., Godet S., Raskin J. P., Pardoën T., Schryvers D.*

#### **IT-7-P-1868**

**In situ mechanical testing in the transmission electron microscope and finite element method simulations on nanoscaled amorphous silica spheres – Densification, hardening and improved intrinsic properties on nanoscale**

Presenting author: **Mačković M.**

*Authors: Mačković M., Niekief F., Spiecker E.*

#### **IT-7-P-1941**

**Deformation modes of Au nanowires revealed by mechanical testing in TEM**

Presenting author: **Oh S.**

*Authors: Lee S., Im J., Bitzek E., Kiener D., Oh S.*

#### **IT-7-P-1969**

**Observation of Strain Aging Behavior in Strain Based Line Pipe Steels using in-situ Heating and Straining TEM stage**

Presenting author: **Hong S.**

*Authors: Hong S., Ahn T., Kim S., Ro Y., Lee C., Kim Y.*

#### **IT-7-P-2081**

**In Situ 3D Studies of the Chlamydomonas Chloroplast Using Cryo-Focused Ion Beam Milling and Cryo-Electron Tomography**

Presenting author: **Schaffer M.**

*Authors: Schaffer M., Engel B. D., Cuellar L. K., Villa E., Plietzko J. M., Baumeister W.*

#### **IT-7-P-2095**

**In-situ Lorentz microscopy of high Bs and low core-loss Fe<sub>85</sub>Si<sub>2</sub>B<sub>8</sub>P<sub>4</sub>Cu<sub>1</sub> nanocrystalline alloys**

Presenting author: **Akase Z.**

*Authors: Akase Z., Shindo D., Sharma P., Makino A.*

#### **IT-7-P-2143**

**Observing impregnation dynamics at the liquid-solid interface using scanning electron microscopy: Charged-controlled SAPO-34 zeolite particle dispersion on SiC substrates**

Presenting author: **Tran C. M.**

*Authors: Tran C. M., Fordsmand H., Appel C. C.*

#### **IT-7-P-2418**

**EBSD Measurements of the Twinning Process in an Mg-4wt%Li-Alloy with an in-situ Tensile / Compression Module in the SEM DSM 982**

Presenting author: **Fahrenson C.**

*Authors: Fahrenson C., Driehorst I., Lentz M., Camin B., Berger D.*

#### **IT-7-P-2483**

**High resolution cryo-CLEM: from cryo-light microscopy to cryo-TEM, through cryo-milling**

Presenting author: **De Marco A.**

*Authors: de Marco A., Mayer T., Mahamid J., Arnold J., Plietzko J.*

#### **IT-7-P-2779**

##### **In-situ TEM studies of the electromigration process in a single InAs nanowire**

Presenting author: **Neklyudova M.**

*Authors: Neklyudova M., Zandbergen H. W.*

#### **IT-7-P-2824**

##### **Understanding mechanisms of assisted sintering through dedicated in situ TEM experiments**

Presenting author: **Van Benthem K.**

*Authors: van Benthem K.*

#### **IT-7-P-2853**

##### **Correlating internal structure and mechanical properties of amorphous silica and gold micro-/nanoparticles using in situ mechanical testing in the scanning and transmission electron microscope**

Presenting author: **Herre P.**

*Authors: Herre P., Paul J., Romeis S., Niekel F., Mačković M., Spiecker E., Peukert W.*

#### **IT-7-P-2870**

##### **Revealing dislocation activities and deformation behavior in Nb<sub>2</sub>AlC using in situ nanoindentation in the transmission electron microscope**

Presenting author: **Schrenker N.**

*Authors: Schrenker N., Kabiri Y., Mueller J., Mackovic M., Spiecker E.*

#### **IT-7-P-2887**

##### **In situ reduction of graphene oxide by Joule heating with TEM-STM system**

Presenting author: **Martín G.**

*Authors: Martín G., Claramunt S., Varea A., Yedra L., Rebled J. M., Sánchez-Hidalgo R., López-Díaz D., Velázquez M. M., Cirera A., Peiró F., Estradé S., Cornet A.*

#### **IT-7-P-2942**

##### **Deformation Behavior of Silica Microparticles under Electron Beam Irradiation**

Presenting author: **Bhowmick S.**

*Authors: Stauffer D., Bhowmick S., Major R., Asif S., Warren O.*

#### **IT-7-P-2970**

##### **Light Irradiation of ETEM Samples for In-Situ Studies of Photocatalysts**

Presenting author: **Miller B. K.**

*Authors: Miller B. K., Crozier P. A., Zhang L.*

#### **IT-7-P-3015**

##### **In situ applications of quantitative magnetic TEM imaging in magnetic nanostructures**

Presenting author: **Rodríguez L. A.**

*Authors: Rodríguez L. A., Magén C., Snoeck E., Gatel C., Marín L., Serrano-Ramón L., Prieto J. L., Muñoz M., Ortolani L., Algarabel P. A., Morellón L., de Teresa J. M., Ibarra M. R.*

#### **IT-7-P-3047**

##### **Reversible In-Situ TEM Electrochemical studies of Fluoride Ion Battery**

Presenting author: **Chakravadhanula K. V.**

*Authors: Chakravadhanula K. V., Fawey M. H., Kübel C., Scherer T., Rongeat C., Munnangi A. R., Fichtner M., Hahn H.*

#### **IT-7-P-3115**

##### **In-situ heating using MEMS devices on FIB/SEM systems**

Presenting author: **Novák L.**

*Authors: Novák L., Vystavěl T., Faber P., Mele L., Šesták J.*

#### **IT-7-P-3273**

##### **Atomic Level In-situ Characterization of NiO-TiO<sub>2</sub> Photocatalysts under Light Irradiation in Water Vapor**

Presenting author: **Zhang L.**

*Authors: Zhang L., Crozier P. A.*

#### **IT-7-P-3335**

##### **Mems-based heaters for ultrahigh temperature in situ TEM studies**

Presenting author: **Erdamar A. K.**

*Authors: Erdamar A. K., Zandbergen H. W.*

#### **IT-7-P-3342**

##### **Applying of 6-carboxyfluorescein (6-FAM) to cytogenetics**

Presenting author: **Radaev A.**

*Authors: Galkina S., Saifitdinova A., Bogomaz D., Radaev A., Gaginskaya E.*

#### **IT-7-P-3408**

##### **In situ TEM deformation of a bulk metallic glass with a K2-IS detector**

Presenting author: **Gammer C.**

*Authors: Gammer C., Rentenberger C., Karnthaler H. P., Czarnik C., Beitzschmidt D., Pauly S., Eckert J., Minor A. M.*

#### **IT-7-P-3442**

##### **Direct evidence for orbital angular momentum transfer from electron vortex beam**

Presenting author: **Thirunavukkarasu G.**

*Authors: Thirunavukkarasu G., Yuan J., McKenna K., Babiker M.*

#### **IT-7-P-5752**

##### **Development of In-Situ Wet-Cell Electron Microscope Holder for Oxygen Nanobubbles by Platinum**

Presenting author: **Zheng H. T.**

*Authors: Zheng H. T., Liu S. Y., Tsai C. T., Haung T. W., Tseng F. G., Chen F. R.*

#### **IT-7-P-5919**

##### **Real-time observation of in-situ cation exchange in CdSe-PbSe nanodumbbells during epitaxial solid-solid-vapor growth**

Presenting author: **Yalcin A. O.**

*Authors: Yalcin A. O., Goris B., Bals S., Van Tendeloo G., Casavola M., Vanmaekelbergh D., Tichelaar F. D., Zandbergen H. W., van Huis M. A.*

#### **IT-7-P-6054**

##### **In-situ observation of gold nanorod self-assembly**

Presenting author: **Novotný F.**

*Authors: Novotný F., Wandrol P., Proška J., Šlouf M.*