

**SUNDAY, JUNE 30th**

5:00 pm	9:00 pm	<b>Welcome early registration at Maison des Mines</b>		
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**MONDAY, JULY 1st**

8:00 am	9:00 am	<b>Registration</b>		
9:00 am	9:20 am	<b>Opening Ceremony</b>		
		<b>Plenary</b>	<b>GB thermodynamics: Atomic and electronic structure</b>	
9:20 am	9:40 am		Beyond bicrystallography: polycrystallography	Denis GRATIAS CPT, Paris, France
9:40 am	10:00 am		Grain boundary energy and curvatures measurements from the 3D structure of polycrystalline materials	Gregory ROHRER CMU, Pittsburgh, USA
10:00 am	10:30 am	<b>Invited speaker</b>	Grain boundary atomic structure and their dynamic behavior in oxides	<b>Yuichi IKUHARA</b> UT, Tokyo, Japan
10:30 am	11:00 am	<b>Coffee break</b>		
11:00 am	11:20 am		1D ordered atomic structure in grain boundary	Mitsuhiro SAITO UT, Tokyo, Japan
11:20 am	11:40 am		Twinning in NiO and CuO	Fanyan MENG UST, Beijing, China
11:40 am	12:00 pm		Numerical simulation of grain boundaries in oxides	Pierre HIREL UL, Lille, France
12:00 pm	12:20 pm		Electronic structure and charge trapping at {112} and {110} twin boundaries in anatase	James QUIRK UY, York, UK
12:20 pm	12:40 pm		Determination of grain boundaries energy in uranium dioxide bicrystals	Renaud BELIN CEA, Cadarache, France
12:40 pm	2:00 pm	<b>Lunch</b>		
2:00 pm	2:20 pm		Get 3D coordinates from electron microscopy images, built approximants, solve the structure: Incommensurate interface in silicon and silver-ratio	Frédéric LANÇON CEA, Grenoble, France
2:20 pm	2:40 pm		Grain boundary structure in high entropy alloys	Diana FARKAS VT, Blacksburg, USA
2:40 pm	3:00 pm		On the temperature dependence of grain boundary and surface energies in tungsten	Lorenz ROMANER MCLF, Leoben, Austria
3:00 pm	3:20 pm		Nano-scale mapping of the electron density at Al grain boundaries and correlation with grain-boundary energy	Eric HOGLUND UV, Charlottesville, USA
		<b>Plenary</b>	<b>GB thermodynamics: Segregation</b>	
3:20 pm	3:50 pm	<b>Invited speaker</b>	Interaction of moving grain boundaries with solutes	<b>Yuri MISHIN</b> GMU, Fairfax, USA
3:50 pm	4:20 pm	<b>Coffee break</b>		
4:20 pm	4:40 pm		A generalization of McLean's segregation formula using a low temperature expansion	Thomas SCHULER CEA, Saclay, France
4:40 pm	5:00 pm		Mechanism of grain-boundary segregation of 3d transition-metal solutes in bcc Fe: Ab initio local-energy analysis	Masanori KOHYAMA NIAIST, Ikeda, Japan
5:00 pm	5:20 pm		Solute segregation at the CSL $\Sigma$ {111} bcc Fe GB	Anastasiia KHOLTOBINA MCLF, Leoben, Austria
5:20 pm	5:40 pm		Solute segregation at {100} and {110} tilt grain boundaries in bcc Fe at the atomic scale	Christophe DOMAIN EDF, Les Renardières, France
5:40 pm	6:00 pm		A combined effect of vacancies and segregated impurities at grain boundaries in nickel	Martina MAZALOVÁ MU, Brno, Czech Republic
6:00 pm	6:20 pm		Compositional analyses at interfaces using atom probe tomography	Lola LILENSTEN MPIE, Düsseldorf, Germany
6:30 pm	9:30 pm	<b>Welcome reception</b>		

TUESDAY, JULY 2nd					
		<b>Welcome early regis</b>	<b>GB thermodynamics: Segregation</b>		
8:00 am	8:20 am		Comparison of different ways to evaluate interfacial excess atomic areal density from atom probe data of grain boundaries	Thomas WALTHER	US, Sheffield, UK
8:20 am	8:40 am		Investigation of grain boundary solute segregation behavior using atomic-resolution STEM-EDS	Bin FENG	UT, Tokyo, Japan
8:40 am	9:00 am		Impact of misorientation at symmetric grain boundaries on segregation ability; for $\Sigma 3\{111\}$ tilt boundaries in Si	Yutaka OHNO	TO, Tohoku, Japan
9:00 am	9:20 am		Sintering of yttrium aluminium garnet (YAG) for laser applications: role of additives on the subsequent (micro-) structural evolution	Camille PERRIÈRE	UL, Limoges, France
9:20 am	9:40 am		Segregation assisted grain boundary precipitation in a model Al-Zn-Mg-Cu alloy	Huan ZHAO	MPIE, Düsseldorf, Germany
9:40 am	10:00 am		An atom-probe tomography study of the temporal evolution of concentration retention excesses and depletions at $\alpha(\text{F.C.C.})/\gamma(\text{L12})$ Interfaces in a Ni-Al-Cr-Re superalloy	David SEIDMAN	NU, Evanston, USA
10:00 am	10:30 am	<b>Coffee break</b>			
		<b>Plenary</b>	<b>GB dynamics: Diffusion, corrosion</b>		
10:30 am	11:00 am	<b>Invited speaker</b>	Grain-boundary phase transition probed by tracer diffusion measurements	<b>Sergiy DIVINSKI</b>	<b>UM, Münster, Germany</b>
11:00 am	11:20 am		Experimental evidence for anomalous grain boundary diffusion of Fe in Cu and Cu-Fe alloys	Vladimir ESIN	MPT, Evry, France
11:20 am	11:40 am		The effect of grain boundary segregation on embrittlement: current advances, challenges and problems	Mojmir ŠOB	MU, Brno, Czech Republic
11:40 am	12:00 pm		Physical metallurgy of segregation and its impact on embrittlement and austenite reversion in medium Mn steels	Dirk PONGE	MPIE, Düsseldorf, Germany
12:00 pm	12:50 pm		Poster presentations 1		
12:50 pm	2:20 pm	<b>Lunch</b>			
2:20 pm	4:20 pm	<b>Poster Session and Coffee break</b>			
		<b>Plenary</b>	<b>GB dynamics: corrosion, wetting</b>		
4:20 pm	4:40 pm		Grain boundary wetting by a second solid phase in the iron-based alloys	Boris STRAUMAL	RAS, Moscow, Russia
4:40 pm	5:00 pm		Influence of the grain boundary structure on the wetting transition in E233A cast alloy	Alexander STRAUMAL	MISIS, Moscow, Russia
5:00 pm	5:20 pm		Wetting of grain boundaries by intermetallic compounds in an industrial magnesium alloy	Kristina TSOY	RAS, Moscow, Russia
5:20 pm	5:40 pm		Grain boundary wetting correlated to the grain boundary properties: a laboratory-based multimodal X-ray tomography investigation	Jun SUN	Xnovo, Køge, Denmark
5:40 pm	6:00 pm		Intergranular corrosion modelling: a cellular automata approach	Simone GUISO	CEA, Saclay, France

WEDNESDAY, JULY 3rd					
		<b>Plenary</b>	<b>Solutes segregation at the CSL <math>\Sigma 3\{111\}</math> bcc Fe GB</b>		
8:00 am	8:30 am	<b>Invited speaker</b>	The how and why of grain boundary dynamics: a disconnection perspective	<b>David SROLOVITZ</b>	<b>CUHK, Hong Kong, China</b>
8:30 am	8:50 am		Visualizing grain boundary properties with octonions	Ian CHESSER	CMU, Pittsburg, USA
8:50 am	9:10 am		Direct imaging of atomistic grain boundary migration	Jiaka WEI	UT, Tokyo, Japan
9:10 am	9:30 am		Dislocation mediated shear coupled migration of (112) tilt grain boundary in $\alpha$ -Fe	Anna SERRA	UPC, Barcelona, Spain
9:30 am	9:50 am		An attempt to connect grain boundary migration to their atomic structure by mean of molecular dynamics	Sylvain QUEYREAU	UP13, Paris, France
9:50 am	10:10 am		A regularized phase field model for anisotropic motion-by-curvature	Thomas PHILIPPE	ÉP, Palaiseau, France
10:10 am	10:40 am	<b>Coffee break</b>			
10:40 am	11:10 am	<b>Invited speaker</b>	Atomic-scale observations of step structure and migration mechanisms in interfaces	<b>Ulrich DAHMEN</b>	<b>LBL, Berkeley, USA</b>
11:10 am	11:30 am		Grain boundaries interacting with the diffusion-controlled growth of alloys	Silvère AKAMATSU	SU, Paris, France
11:30 am	11:50 am		Grain boundary spinodal and transient spinodal in FeMn system: phase-field and experimental study	Reza DARVISHI KAMACHALI	MPIE, Düsseldorf, Germany
11:50 am	12:10 pm		Theory and modeling of the austenite-martensite interface structure and glissile transformation in steels	Francesco MARESCA	ÉPFL, Lausanne, Switzerland
12:10 pm	12:30 pm		Migration of fcc/bcc interfaces—In situ TEM study and MD simulation	Wenzheng ZHANG	TU, Beijing, China
12:30 pm	2:00 pm	<b>Lunch</b>			
		<b>Free Afternoon</b>			

**THURSDAY, JULY 4th**

8:00 am	8:30 am	<b>Welcome early regis</b>	Grain boundaries in solar cells: structure-property correlations	<b>Chen LI</b>	EMAT, Uni Antwerpen, Belgium
		<b>Parallel sessions</b>	<b>A: Functional properties and low dimensional systems</b>		
8:45 am	9:05 am		Universal dynamic response in polycrystals of advanced superionic conductors	Alexandra ANDREEVA	RAS, Moscow, Russia
9:05 am	9:25 am		Atomic structure and Li-ion conductivity at (La,Li)TiO3 high-angle tilt grain boundaries	Shun SASANO	UT, Tokyo, Japan
9:25 am	9:45 am		Ab-initio investigation of structure, chemistry and electronic properties of doped grain boundaries in ZnO	Jürgen SPITALER	MCLF, Leoben Austria
9:45 am	10:05 am		AgNWs heat-treatment at low temperature (60°C): a combined STEM and MD Investigation	Esmaeil ADABIFIROOZJAEI	NIMS, Tsukuba, Japan
10:05 am	10:25 am		Higher temperatures yield smaller grains in a thermally stable phase-transforming nanocrystalline alloy	Dor AMRAM	IIT, Haifa, Israel
10:25 am	11:00 am	<b>Coffee break</b>			
11:00 am	11:20 am		Extended crystal defects in layered chalcogenide materials: atomic scale structural investigations	Douglas MEDLIN	SNL, Livermore, USA
11:20 am	11:40 am		Fast mass transportation of metastable AgCu alloys in confined AlN/AgCu/AlN nanolayer sandwiches	Luchan LIN	EMPA, Dübendorf, Switzerland
11:40 am	12:00 pm		Anisotropic intermixing in Au-Fe bimetallic nanowhiskers	Yuanshen QI	IIT, Haifa, Israel
12:00 pm	12:20 pm		Generation of 2H polytype at an incoherent second-order twin boundary in a silicon nanowire	Jean-Luc MAURICE	ÉP, Palaiseau, France
12:20 pm	12:40 pm		Axial strain relaxation in core-shell nanowires with a polyhedral core due to the nucleation of misfit prismatic dislocation loops	Stanislav KRASNITCKII	SPPU, Saint Petersburg, Russia
12:40 pm	1:00 pm		The deformation mechanism of bi-crystalline twinned Au nanowires	Dan MORDEHAI	IIT, Haifa, Israel
		<b>Parallel sessions</b>	<b>B: Mechanical properties</b>		
8:45 am	9:05 am		Stress concentration and distribution in ceramic composites with triple junction heterogeneities	Aleksandra VAKAEVA	SPSU, Saint Petersburg, Russia
9:05 am	9:25 am		Crystal slip and Grain Sliding: a two-stroke engine driving ductile localization	Alexandre DIMANOV	ÉP, Palaiseau, France
9:25 am	9:45 am		Microstructural investigation of damage evolution at the intersection of shear bands	Gregory GERSTEIN	LUH, Garbsen, Germany
9:45 am	10:05 am		Strengthening mechanisms in heavily cold-rolled stainless steels by heterogeneous nano-structures	Hiromi MIURA	TOT, Toyohashi, Japan
10:05 am	10:25 am		Effect of interface character on the deformation behaviour of nanostructured metals – a case study on nickel	Oliver RENK	AAS, Leoben, Austria
10:25 am	11:00 am	<b>Coffee break</b>			
11:00 am	11:20 am		Comparison between cohesion curves of various carbide-metal interfaces predicted by DFT and the universal binding energy relationship (UBER)	Maxime SAUZAY	CEA, Saclay, France
11:20 am	11:40 am		Experimental study on mechanisms of age-hardening in V-alloyed and V-free high-nitrogen steels	Elena ASTAFUROVA	RAS, Moscow, Russia
11:40 am	12:00 pm		Mechanical behaviour of nickel symmetric CSL grain boundaries under triaxial loading: from dislocation nucleation to decohesion	Bertrand SICAUD	CEA, Saclay, France
12:00 pm	12:20 pm		Cohesive stress heterogeneities and the transition from intrinsic ductility to brittleness	Dôme TANGUY	UL1, Lyon, France
12:20 pm	12:40 pm		First principles investigation of H interaction with a Σ5 [100] twist grain boundary in Al during a uniaxial tensile test	David TINGAUD	UP13, Paris, France
12:50 pm	2:20 pm	<b>Lunch</b>			
		<b>Plenary</b>	<b>Plasticity mechanisms</b>		
2:30 pm	3:00 pm	<b>Invited speaker</b>	Using in-situ TEM to probe interface related plasticity mechanisms	<b>Frédéric MOMPIOU</b>	CEMES - CNRS, Toulouse, France
3:00 pm	3:20 pm		Unconventional twin interfaces revealed by EBSD in a single crystal of magnesium	Cyril CAYRON	ÉPFL, Lausanne, Switzerland
3:20 pm	3:40 pm		On the interaction of a stacking fault with the (1 0 -1 2) twin boundary in magnesium	Andriy OSTAPOVETS	CEIT, Brno, Czech Republic
3:40 pm	4:00 pm		Deformation mechanisms of polycrystalline cobalt. A quantitative study by electron microscopy	Éric HUG	UC, Caen, France
4:00 pm	4:20 pm		Effect of anisotropic elasticity on dislocation pile-ups and stress-induced slip transmission at grain boundaries	Xiaolei CHEN	UL, Metz, France
4:20 pm	4:50 pm	<b>Coffee break</b>			
4:50 pm	5:10 pm		Dislocation/coherent twin boundary interactions: new insights from quantitative in-situ TEM tensile testing	Hosni IDRISSE	UCL, Louvain, Belgium
5:10 pm	5:30 pm		Atomistic simulation on nonequilibrium grain boundaries	Ayrat NAZAROV	RAS, Moscow, Russia
5:30 pm	5:50 pm		The role of interface diffusion in deformation of metal nanostructures	Eugen RABKIN	IIT, Haifa, Israel
8:00 pm	11:30 pm	<b>Gala Dinner</b>			

**FRIDAY, JULY 5th**

FRIDAY, JULY 5th					
		<b>Welcome early regis</b>	<b>Interphase boundaries</b>		
8:30 am	9:00 am	<b>Invited speaker</b>	Unveiling metal-insulator transition in vanadium oxides	<b>CHOI Si-Young</b>	POSTECH, South Korea
9:00 am	9:20 am		Influence of interphase boundary anisotropy on lamellar eutectic solidification microstructures	Mathis PLAPP	ÉP, Palaiseau, France
9:20 am	9:40 am		Atom probe tomography study of austenitic transformation interfaces in high-formability dual-phase steels	Arthur MARCEAUX DIT CLÉMENT	AMR, Maizières-lès-Metz, France
9:40 am	10:00 am		Effect of austenite stability on the competition between ductile and interfacial fracture in a medium-Mn, ultra-fine-grained steel for automotive applications	Anne-Françoise GOURGUES-LORENZO	MPT, Evry, France
10:00 am	10:20 am		Twin-interface interactions in bimetallic systems: molecular dynamics study	Romuald BÉJAUD	ÉP, Palaiseau, France
10:20 am	10:40 am		Numerical and experimental evidences of matrix slip across complex precipitate interfaces	Julien GUÉNOLÉ	AU, Aachen, Germany
10:40 am	11:10 am	<b>Coffee break</b>			
11:10 am	11:30 am		Zr-Cr interface stability of irradiated chromium-coated Zircaloy-4 alloy	Joël RIBIS	CEA, Saclay, France
11:30 am	11:50 am		Metal/ceramic interfaces: a new class of high-diffusivity paths	Aakash KUMAR	UP, Philadelphia, USA
11:50 am	12:10 am		Some mechanisms controlled by diffusion at interphases: lateral growth and dewetting of silicides thin films	Dominique MANGELINCK	UM, Marseille, France
12:10 am	12:30 pm		Coherent topotactic interfaces	Rong YU	TU, Beijing, China
12:30 pm	12:50 pm		Interface effects in the protective hard coatings – insight into the structure-property relationship at the atomic scale	Zaoli ZHANG	AAS, Austria
12:50 pm	1:00 pm	<b>Closing Ceremony</b>			