

## "Laboratory of Terahertz and Mid-Infrared Collective Phenomena in Semiconductor Nanostructures" (TERAMIR)



Main Objectives Research on theory, growth, processing and research on Terahertz and

Midinfrared (TERA-MIR) properties of novel semiconductor nanostructures with emphasis on Dirac like energy dispersion systems

**Coordinators** W. Knap (France)

C. Skierbiszewski (Poland) V. Gavrilenko (Russia)

## Main partners from France/Poland and Russia

Laboratoire Charles Coulomb (L2C) Université Montpellier (coordinator W. Knap) Laboratoire Matériaux et Phénomènes Quantiques Université Paris Diderot-Paris7 Laboratoire National des Champs Magnétiques Intenses

Institute of High Pressure Physics of the Polish Academy of Sciences Warsaw, POLAND (coordinator C. Skierbiszewski)

Institute for Physics of Microstructures, Russian Academy of Science GSP-105, Nizhny Novgorod, 603950, Russia (coordinator V. Gavrilenko)

Laboratory of Epitaxial Technology from Molecular Beams of A<sub>2</sub>B<sub>6</sub> compounds, Rzhanov Institute of Semiconductor Physics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

**Project event** LIA Meeting June 2/June3 2015

**Starting date and time** June 2 at 10 am **Finishing date and time** June 3 at 5 pm

Place Institute of High Pressure Physics PAS (UNIPRESS)

**Address** Aleja Prymasa Tysiąclecia 98, Warszawa

Tuesday 02 June		
9:30 - 10:00	Welcome coffee/cakes	
Welcome introduction		
10:00 - 10:30	Izabella Grzegory – Director of Institute of High Pressure Physics PAS	
	Sebastien Reymond – French Embassy	
	Jolanta Krzesniak – Polish Academy of Sciences	
	Tomasz Dietl – Institute of Physics PAS	
	Tadeusz Suski – Deputy Director for Research of IHPP PAS	
First Session		
10:30 – 11:30	M. Orlita (LNCMI-CNRS, Grenoble)	
	Magneto-optics of massive Dirac electrons in Bi <sub>2</sub> Se <sub>3</sub> and HgCdTe	
11:30 – 12:15	S. Dvorecki (RIS SBRAS, Novosibirsk)	
	MBE growth of HgCdTe layers	
Lunch break		
12:15 – 13:30	Lunch	
Second Session		
13:30 – 14:00	G. Grabecki (IP PAS, Warsaw)	
	Nonlocal resistance and its fluctuations in microstructures of band-inverted	
	HgTe/(Hg,Cd)Te quantum wells	
14:00 – 14:30	M. Majewicz (IP PAS, Warsaw)	
	Nanostructurization of HgTe/HgCdTe quantum wells	
15:00 – 15:30	F. Teppe (LC2 CNRS, Montpellier)	
	Recent results on probing of topological phases in HgCdTe and InAs/GaSb	
	structures in Montpellier	
15:30 – 16:00	Coffee/cakes	
	NEW LIA MEMBERS PRESENTATION	
16:00 – 16:30	G. Fedorov (MSPU, Moscow)	
	Response of asymmetric graphene and carbon nanotube based nanostructures	
	to THz radiation	
16:30-16:45	A. Shurakov (MSPU, Moscow)	
	Recent results on developing HEB and Schottky terahertz mixers for	
	radioastronomy	
16:45-17:15	Y. Mityagin (LPI RAS, Moscow)	
	Carrier dynamics and stimulated terahertz transitions between Landau levels	
	in cascade GaAs/AlGaAs quantum well structures with asymmetric period	

## **Conference dinner**

Wednesday 03 June		
9:30 - 10:00	Welcome coffee/cakes	
First Session		
10:00 - 10:45	T. Story (IP PAS, Warsaw)	
	Band inversion in PbSnSe topological crystalline insulator	
10:45 – 11:30	M. Potemski (LNCMI-CNRS, Grenoble)	
	Electronic and phonon excitations in graphene as probed by magneto-Raman scattering	
11:30 – 12:15	V. Gavrilenko (IPM RAS, Nizhny Novgorod)	
	Long wavelength lasers based on narrow gap semiconductors and quantum	
	well heterostructures	
Lunch break		
12:15-13:30	Lunch	
13:30 – 14:15	C. Skierbiszewski (IHPP PAS, Warsaw)	
	Plasma assisted molecular beam epitaxy for nitride based optoelectronic	
	devices	
	Second Session	
14:15 – 15:00	S. Krishtophenko (IPM RAS, Nizhnij Novgorod)	
	Pressure tuning of phase transition in CdHgTe quantum well structures	
15:00 – 15:45	P. Kruszewski (IHPP PAS, Warsaw)	
	Vertical Schottky diodes on high quality bulk GaN	
15:45-16:30	W. Knap (IHPP PAS, Warsaw)	
	Plasma Oscillations in FETs & First Terahertz Scanners	
Closing		
16:30 – 17:00	Closing and coffee	

Important information		
Lodging	10 single rooms were reserved with preferential prices in Hotel Ibis – Centrum	
	Solidarności street 165, Warsaw	
	Please contact organizing committee to reserve	
Workshop	G. Cywinski (gc@unipress.waw.pl)	
organizing	S. Yatsunenko (yatsun@unipress.waw.pl)	
committee	C. Skierbiszewski (czeslaw@unipress.waw.pl)	
Address	Aleja Prymasa Tysiąclecia 98, Warszawa	
GPS data	52°14'47.4"N 20°57'29.6"E (52.246491 N, 20.958232 E)	
Contact	tel. (+4822) 8760352	
	mobile: (+48) 505 750 498	
	fax. (+4822) 8760330	
	email: gc@unipress.waw.pl	