

# SCIENTIFIC PROGRAM

## SCHEDULE FOR ORAL CONTRIBUTIONS

### Sunday, September 26

14:00 - 19:00			<b>CHECK-IN</b>
16:00 - 18:00			<b>WELCOME RECEPTION</b>
18:00 - 19:00			<b>DINNER</b>
19:00 - 19:15			<b>WELCOME ADDRESS; M. Schädel, GSI, Darmstadt</b>
19:15 - 20:00	<b>O-1</b>	<b>P, H</b>	<b>G. Herrmann, Univ. Mainz:</b> : <i>The Superheavy-Element Rush – Reminiscences of a Participant</i>
20:00 - 20:45	<b>O-2</b>	<b>P, H</b>	<b>P. Armbruster, GSI, Darmstadt:</b> <i>Reminiscences from (1971-88)-Experiments</i>

### Monday, September 27

8:30 - 9:00			<b>OPENING</b>
9:00 - 9:45	<b>O-3</b>	<b>P, NRE</b>	<b>S. Hofmann, GSI, Darmstadt:</b> <i>Status and Perspectives of Superheavy-Element Research</i>
9:45 - 10:30	<b>O-4</b>	<b>R, NRE</b>	<b>A. Yeremin *, JINR, Dubna:</b> <i>Synthesis of Superheavy Elements with <sup>48</sup>Ca and Lighter Ion Beams</i>
10:30 - 11:00			<b>BREAK</b>
11:00 - 11:25	<b>O-5</b>	<b>T, NRE</b>	<b>J. Wild *, LLNL, Livermore:</b> <i>The Synthesis of Superheavy Nuclei in the <sup>48</sup>Ca + <sup>244</sup>Pu Reaction</i>
11:25 - 11:50	<b>O-6</b>	<b>T, NRE</b>	<b>V. Ninov, LBNL, Berkeley:</b> <i>Experimental Work at the Berkeley Gas-Filled Separator</i>
11:50 - 12:15	<b>O-7</b>	<b>T, NST, NRT</b>	<b>R. Smolanczuk, Soltan Inst. for Nuclear Studies, Warsaw:</b> <i>Production and Decay Properties of Superheavy Nuclei</i>
12:15 - 12:30			<b>Conference Photo</b>
12:30 - 14:00			<b>LUNCH</b>
14:00 - 14:45	<b>O-8</b>	<b>P, CT</b>	<b>P. Pyykkö, Univ. Helsinki:</b> <i>Relativistic Effects in Heavy-Element Chemistry</i>
14:45 - 15:30	<b>O-9</b>	<b>P, CE</b>	<b>J.V. Kratz, Univ. Mainz:</b> <i>Transactinide Chemistry</i>
15:30 - 16:00			<b>BREAK</b>
16:00 - 16:45	<b>O-10</b>	<b>R, CE</b>	<b>K.E. Gregorich, LBNL, Berkeley:</b> <i>Putting Transactinides in the Periodic Table: Aqueous Chemistry of the New d Elements</i>
16:45 - 17:10	<b>O-11</b>	<b>T, CE</b>	<b>E. Strub, Univ. Mainz:</b> <i>Fluoride Complexation of Rutherfordium (Rf, Element 104)</i>
17:10 - 17:35	<b>O-12</b>	<b>T, CE</b>	<b>C. Le Naour, IPN; Orsay:</b> <i>Production of <sup>262</sup>Db in the Reaction <sup>248</sup>Cm(<sup>19</sup>F, 5n) and Isolation of more than 60 Atoms in Dilute HF Medium</i>
17:35 - 18:00	<b>O-13</b>	<b>T, M</b>	<b>W. Quint, GSI, Darmstadt:</b> <i>The SHIPTRAP Project - A Capture and Storage Facility at GSI for Heavy Radionuclides from SHIP</i>
18:00 - 19:00			<b>DINNER</b>
19:00 - 21:00			<b>POSTER SESSION</b>

### Tuesday, September 28

8:30 - 9:15	<b>O-14</b>	<b>R, CE</b>	<b>A. Türler, PSI, Villigen:</b> <i>Gas Phase Chemistry of the Transactinide Elements</i>
9:15 - 9:40	<b>O-15</b>	<b>T, CE</b>	<b>I. Zvara, JINR, Dubna:</b> <i>Interpretation of Gas Phase Chemistry Experiments with Transactinoids: Element 106, Heterogeneous Column Surface</i>
9:40 - 10:05	<b>O-16</b>	<b>T, CE</b>	<b>S. Hübener, FZ Rossendorf:</b> <i>Physico-Chemical Characterization of Seaborgium as Oxide Hydroxide</i>
10:05 - 10:30	<b>O-17</b>	<b>T, M</b>	<b>R. Eichler, Univ. Bern:</b> <i>Gas Phase Chemistry of the Group 7 Homologues of Bohrium (Element 107)</i>
10:30 - 11:00			<b>BREAK</b>
11:00 - 11:45	<b>O-18</b>	<b>P, NST</b>	<b>J.-F. Berger, Centre d'Etudes de Bruyeres-le-Chatel:</b> <i>Nuclear Structure in the Heaviest Elements</i>
11:45 - 12:30	<b>O-19</b>	<b>R, NSE</b>	<b>M. Leino, Univ. Jyväskylä:</b> <i>Investigations of Nuclear Structure in the Heaviest Elements</i>
12:30 - 12:55	<b>O-20</b>	<b>T, NSE</b>	<b>P. Reiter, LMU München:</b> <i>Structure, Limits of Stability, Fission Barrier and Formation Mechanism of the Z=102 Isotope <sup>254</sup>No</i>
13:00 - 14:00			<b>LUNCH</b>
14:00 - 23:00			<b>EXCURSION AND CONFERENCE DINNER</b>

## Wednesday, September 29

8:30 - 9:15	<b>O-21</b>	R, CT	<b>U. Kaldor *</b> , <i>Tel Aviv University</i> : Theoretical Prediction of Properties of Heavy and Superheavy Atoms
9:15 - 10:00	<b>O-22</b>	R, CT	<b>V. Pershina</b> , <i>Univ. Mainz</i> : Relativistic Quantum Chemistry: Progress in Transactinide Research
10:00 - 10:25	<b>O-23</b>	T, CT	<b>M. Seth</b> , <i>ANL, Argonne</i> : High Level Quantum Chemical Calculations of the Properties of Elements 111 to 114
10:25 - 11:00			<b>BREAK</b>
11:00 - 11:25	<b>O-24</b>	T, CT	<b>M. Hirata</b> , <i>JAERI, Tokai</i> : Electronic Structure of Tetravalent Zr, Hf and Rf Nitrates
11:25 - 11:50	<b>O-25</b>	T, CT	<b>B.L. Zhuikov</b> , <i>Inst. for Nucl. Research, Moscow</i> : An Approach for Gas Chemistry of New Elements (IV Group as Example)
11:50 - 12:15	<b>O-26</b>	T, NSE	<b>K.H. Schmidt</b> , <i>GSI, Darmstadt</i> : New Results on the Role of Shell Effects in Nuclear Fission from Experiments with Secondary Beams
12:15 - 12:40	<b>O-27</b>	T, NSE	<b>Y. Nagame</b> , <i>JAERI, Tokai</i> : Fission Characteristics of Very Heavy Nuclides
12:40 - 14:00			<b>LUNCH</b>
14:00 - 14:45	<b>O-28</b>	P, NRT	<b>Y. Abe</b> , <i>YITP, Kyoto</i> : Reaction Theories for Synthesis of Superheavy Elements
14:45 - 15:30	<b>O-29</b>	R, NRT	<b>N.V. Antonenko</b> , <i>JINR, Dubna</i> : Fusion of Heavy Nuclei within Dinuclear System Concept
15:30 - 16:00			<b>BREAK</b>
16:00 - 16:25	<b>O-30</b>	T, NRT	<b>E. Cherepanov</b> , <i>JINR, Dubna</i> : Production Cross Sections of Superheavy Elements for Cold and Hot Fusion Reactions
16:25 - 16:50	<b>O-31</b>	T, NRT	<b>Y. Aritomo</b> , <i>JINR, Dubna</i> : Fusion-Fission Dynamics for Synthesis of Superheavy Elements
16:50 - 17:15	<b>O-32</b>	T, NRT	<b>R.K. Gupta</b> , <i>Panjab University</i> : Cold Synthesis of Superheavy Elements Using $^{208}\text{Pb}$ , $^{48}\text{Ca}$ and Other Lighter Beams
17:15 - 17:40	<b>O-33</b>	T, NRE	<b>S. Mitsuoka</b> , <i>JAERI, Tokai</i> : Fusion of Deformed Nuclei in the Vicinity of the Coulomb Barriers
17:40 - 18:00	<b>O-34</b>	T, NRE	<b>R. Dressler *</b> , <i>TU Dresden</i> : Production of Neutron Rich Isotopes in xn- and $\alpha$ -xn-Reactions
18:00 - 19:00			<b>DINNER</b>
19:00 - 21:00			<b>POSTER SESSION</b>

## Thursday, September 30

8:30 - 9:15	<b>O-35</b>	R, NST	<b>J.A. Maruhn *</b> , <i>Univ. Frankfurt</i> : Superheavy Nuclei in the Relativistic Mean-Field Theory
9:15 - 9:40	<b>O-36</b>	T, NST	<b>Z. Patyk</b> , <i>Soltan Inst. for Nuclear Studies, Warsaw</i> : Properties of Superheavy Nuclei Calculated within Macroscopic-Microscopic Approach
9:40 - 10:05	<b>O-37</b>	T, NST	<b>C. Mouze</b> , <i>Univ. Nice</i> : Why Does $^{270}\text{Sg}$ Fission Symmetrically ?
10:05 - 10:30	<b>O-38</b>	T, M	<b>A. Mueller</b> , <i>IPN, Orsay</i> : Perspectives of Intense Neutron-Rich Exotic Beams for Heavy Element Research
10:30 - 11:00			<b>BREAK</b>
11:00 - 12:00			<b>HIGHLIGHTS AND PERSPECTIVES; D.C. Hoffman, LBNL, Berkeley</b>
12:00			<b>END</b>
12:00 - 13:00			<b>LUNCH</b>
13:00 - 16:00		(optional)	<b>Visit to GSI or Univ. Mainz (on request)</b>

**P** = Plenary Talk (35+10 min)  
**R** = Review Talk (35+10 min)  
**T** = Topical Contribution (20+5 min)  
**\*** = Presenting Author  $\neq$  1<sup>st</sup> Author

**NST** = Nuclear Structure Theory  
**NSE** = Nuclear Structure Experiment  
**NRT** = Nuclear Reaction Theory  
**NRE** = Nuclear Reaction Experiment

**CT** = Chemical Theory  
**CE** = Chemical Experiment  
**M** = Methodological Development  
**H** = History