

# Virtual Superheavy Elements Seminar

Organizers: G. Chubarian, H. Haba, M. Kowal, M. Warda

Sebastian  
Raeder  
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GSI  
Scholtzszentrum  
für  
Ionenforschung,  
Darmstadt,  
Germany

## *“Status and prospects of Laser Spectroscopy of the heaviest elements”*

Laser spectroscopy is a powerful tool to unveil fundamental atomic and nuclear properties by probing the atomic structure in detail with laser light. Nevertheless the application of this technique to the heaviest elements remains difficult due to low available amounts. In this presentation the challenges in laser spectroscopy of the heaviest elements will be discussed in view of recent laser spectroscopic experiments in einsteinium (Z=99), fermium (Z=100) and nobelium (Z=102) isotopes performed at GSI, Darmstadt and Mainz university. Besides the present status of laser spectroscopy studies the perspectives for experiments on superheavy elements will be discussed.

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70 Yb ytterbium 173.05	69 Tm thulium 168.93	68 Er erbium 167.26	67 Ho holmium 164.93	66 Dy dysprosium 162.50	65 Tb terbium	64 Gd gadolinium	63 Eu europium	62 Sm samarium	61 Pm promethium	60 Nd neodymium	59 Pr praseodymium	117 Ts tennessine	116 Lv livermorium	115 Mc moscovium	114 Fl flerovium	113 Nh nihonium	112 Cn copernicium	111 Rg roentgenium	110 Ds darmstadtium	109 Mt meitnerium	108 Hs hassium	107 Bh bohrium	106 Sg seaborgium	74 W tungsten 183.84	75 Re rhenium 186.21	76 Os osmium 190.23(3)	77 Ir iridium 192.22	78 Pt platinum 195.08	79 Au gold 196.97	80 Hg mercury 200.59	111 Nh nihonium	112 Cn copernicium	113 Nh nihonium	114 Fl flerovium	115 Mc moscovium	116 Lv livermorium	117 Ts tennessine
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