

## Recent results on the reactive collisions of electrons with $\text{H}_2^+$ , $\text{BeH}^+$ , $\text{ArH}^+$ and some of their isotopologues

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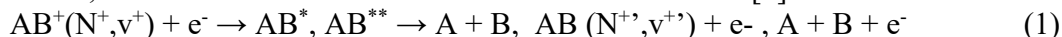
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Molecular cations of hydrogen and hydrides are important in the kinetics of the fusion plasma, close to the wall and/or the divertor. Their collisions with electrons result in dissociative recombination, ro-vibrational excitation and dissociative excitation [1]:



Here  $\text{N}^+/\text{v}^+$  stand for the rotational/vibrational quantum numbers of the cation, whereas  $\text{AB}^*$  and  $\text{AB}^{**}$  for a bound excited (mostly Rydberg) state and for a dissociative (mostly doubly- or multiply-excited) state respectively of the neutral.

We will show our recently-computed cross sections for the collisions of  $\text{H}_2^+$ ,  $\text{HD}^+$ ,  $\text{D}_2^+$ ,  $\text{ArH}^+$ ,  $\text{ArD}^+$ ,  $\text{BeH}^+$ ,  $\text{BeD}^+$  and  $\text{BeT}^+$  with electrons of energy up to 12 eV, computed with our method based on the Multichannel Quantum Defect Theory (MQDT) [2-4]. The major physical features characterizing the extreme energies – rotational effects at very low energy, infinite series of dissociative channels and vibrational continua at high energy – will be illustrated.

### References

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