

## LIST OF PUBLICATIONS

### Summary:

- A) Monographs, edited books, compendia: 16
- B) Chapters in books: 12
- C) Review articles, invited papers: 27
- D) Articles in refereed journals: 290
- E) Invited talks at international conferences: 35

## Detailed list of publications

### A. Monographs, Edited Books, Compendia

#### (i) Monographs

1. R.K. Janev  
Atomic Physics, Vols. 1 and 2  
University Press, Skopje (1972) (in Macedonian)
2. R.K. Janev, L.P. Presnyakov, V.P. Shevelko  
Physics of Highly Charged Ions.  
Springer-Verlag, Berlin-Heidelberg (1985)
3. L.P. Presnyakov, V.P. Shevelko, R.K. Janev  
Elementary Processes Involving Multiply Charged Ions.  
Energoatom Izdat, Moscow (1986), (in Russian)
4. R.K. Janev, W.D. Langer, K. Evans, D.E. Post  
Elementary Processes in Hydrogen-Helium Plasmas.  
Springer-Verlag, Berlin-Heidelberg (1987)
5. V.I. Lend'el, V.Yu. Lazur, M.L. Karbovanets, R.K. Janev  
Introduction to the Theory of Atomic Collisions.  
Vysshaya shkola, L'vov (1989), (in Russian)
6. R.K. Janev  
Controlled Thermonuclear Fusion.  
Institute of Physics, Belgrade (1989) (in Serbo-Croatian)
7. R.K. Janev, Lj. Petkovski

Atomic Physics.  
Macedonian Academy of Sciences and Arts, Skopje (2012) (in Macedonian).

**(ii) Editted Books**

9. R.K. Janev (ed)  
Physics of Ionized Gases.  
(Invited Lectures and Progress Reports of SPIG'78)  
Nauka i društvo, Beograd (1978)
10. R.K. Janev, H.W. Drawin (eds.)  
Atomic and Plasma-Material Interaction Processes in Controlled Thermonuclear Fusion.  
Elsevier Publ. Co., Amsterdam (1993)
11. R.K. Janev (ed.)  
Atomic and Molecular Processes in Fusion Edge Plasmas.  
Plenum Publ. Corp., New York (1995)

**(iii) Guest Editor for international journal volumes**

12. Physica Scripta, Topical issue, vol. **T 37** (1991): "Collision Processes of Metallic Ions in Fusion Plasmas"
13. Physica Scripta, Topical issue, vol. **T 62** (1996): "Collision Processes of Be and B Atoms and Ions in Fusion Plasmas"
14. Physica Scripta, Topical issue, vol. **T 96** (2002): "Atomic and Molecular Processes in Divertor Plasma Volume Recombination" (with D.R. Schultz as co-editor)

**(iv) Compendia**

15. R.A. Phaneuf, R.K. Janev, M.S. Pindzola  
Atomic Data for Fusion, Vol. 5: Collisions of Carbon and Oxygen Ions with Electrons, H, H<sub>2</sub> and He.  
Oak Ridge National Laboratory, ORNL-6090, Oak Ridge, Tennessee (1987)
16. R.K. Janev, J.J. Smith  
Cross Sections for Collision Processes of Hydrogen Atoms with Electrons, Protons and Multiply Charged Ions.  
At. Plasma-Mat. Inter. Data Fusion, vol. 4, IAEA, Vienna (1993).

**B. Chapters in Books**

1. R.K. Janev, D.E. Post

- Atomic physics aspects of particle transport in fusion plasmas.  
In: "Physics of Ionized Gases", Ed. M.M. Popovic (World Sci. Publ. Co., Singapore, 1985),p. 201
2. R.K. Janev  
Theory of charge exchange and ionization in ion-atom (ion) collisions.  
In: "Atomic Processes in Electron-Ion and Ion-Ion Collisions", Ed. F. Brouillard, (Plenum Press, New York, 1986), p. 239
  3. R.K. Janev, P.S. Krstic  
Dynamical processes involving quasi-stationary states.  
In: "Spectroscopy and Collisions of Few-Electron Ions"  
Eds. V. Zoran et al., (World Scientific Inc., Singapore, 1989) p. 317
  4. R.K. Janev  
Atomic processes in thermonuclear fusion plasmas.  
in: "Review of Fundamental Processes and Applications of Atoms and Ions",  
Ed. C.D. Lin (World Scientific Publ. Co., Singapore, 1993) p. 1
  5. R.K. Janev  
Role of atomic and plasma-material interaction physics in controlled thermonuclear fusion research and development.  
In: "Atomic and Plasma-Material Interaction Processes in Controlled Thermonuclear Fusion",  
Eds. R.K. Janev and H.W. Drawin (Elsevier, Amsterdam, 1993) p. 27
  6. R.A. Phaneuf, R.K. Janev  
Establishment and status of atomic and molecular collision databases for fusion plasma applications.  
In: "Atomic and Plasma-Material Interaction Processes in Controlled Thermonuclear Fusion",  
Eds. R.K. Janev and H.W. Drawin (Elsevier, Amsterdam, 1993) p. 371
  7. R.K. Janev  
Basic properties of fusion edge plasmas and role of atomic and molecular processes.  
In: "Atomic and Molecular Processes in Magnetic Fusion Edge Plasmas",  
Ed. R.K. Janev (Plenum Press, New York, 1995) p. 1
  8. R.K. Janev, H.P. Winter, W. Fritsch  
Electron transfer processes in slow collisions of H, He and H<sub>2</sub> with plasma impurity ions.  
In: "Atomic and Molecular Processes in Magnetic Fusion Edge Plasmas",  
Ed. R.K. Janev (Plenum Press, New York, 1995) p. 341
  9. F. Linder, R.K. Janev, J. Botero  
Reactive ion-molecule collisions involving hydrogen and helium.  
In: "Atomic and Molecular Processes in Magnetic Fusion Edge Plasmas",  
Ed. R.K. Janev (Plenum Press, New York, 1995) p. 397
  10. R.K. Janev

Excitation processes in collisions of atoms with multiply charged ions.  
In: "Atomic Physics with Heavy Ions",  
Eds. H.F. Beyer and V.P. Shevelko (Springer, Heidelberg-Berlin, 1999) p. 291

11. R.K.Janev  
Collision processes of atomic and molecular hydrogen in fusion plasmas.  
In: "Atomic and Surface Data Issues in Nuclear Fusion Research",  
Eds. D.Reiter and R.E.H.Clark (Springer, Heidelberg-Berlin, 2005) p. 415.
12. R.K.Janev, D.Reiter, U.Samm  
Atomic processes in low-temperature hydrogen plasmas.  
In: "Encyclopedia of Low-Temperature Plasmas", Series B, Vol. V-1/2 (2007).  
Ed. V. Fortov (Moscow, 2007) p.110 (In Russian)

### C. Review Articles, Invited Papers

1. R.K. Janev  
Modern methods in the theory of heavy particle collisions.  
In: "Physics of Ionized Gases", (Inv. Lectures of IV Yugoslav Symp. Phys. Ioniz. Gases)  
Ed. B. Perovic, Beograd, 1969, p.133
2. R.K. Janev  
Non-adiabatic transitions between ionic and covalent states.  
Adv. Atom. Mol. Phys. 12, 1 (1976)
3. R.K. Janev  
Atomic and molecular processes involving ionic-covalent nonadiabatic coupling.  
In: "Physics of Ionized Gases", (Inv. lectures and progress reports of SPIG-78),  
Ed. R.K. Janev, Beograd, 1978, p. 171
4. R.K. Janev, T.P. Grozdanov  
Charge-exchange processes in atom-multicharged ion collisions.  
In: "Physics of Ionized Gases", (Inv. lectures and progress reports of SPIG-80),  
Ed. M. Matic, Beograd, 1981, p. 351
5. R.K. Janev, L.P. Presnyakov  
Collision processes of multiply charged ions with atoms.  
Phys. Rep. 70, 1 (1981)
6. B.H. Bransden, R.K. Janev  
Electron capture in collisions of hydrogen atoms with fully stripped ions.  
Adv. At. Mol. Phys. 19, 1 (1983)
7. R.K. Janev  
Excited states created in charge transfer collisions between atoms and highly charged ions.  
Physica Scripta T3, 208 (1983)

8. R.K. Janev  
An overview on collision processes of highly charged ions with atoms:  
Present status and problems.  
In: "Atomic Collision Processes with Multiply Charged Ions",  
Ed. B. Perovic (B. Kidrich Inst. of Nucl. Sciences, Belgrade, 1983), p. 37
9. L.P. Presnyakov, R.K. Janev  
Excitation and ionization processes in electron-multiply charged ion collisions.  
In: "Atomic Collision Processes with Multiply Charged Ions",  
Ed. B. Perovic (B. Kidrich Institute of Nuclear Sciences, Belgrade, 1983), p. 155
10. R.K. Janev, H. Winter  
State - selective electron capture in atom-highly charged ion collisions.  
Phys. Rep. 117, 265 (1985)
11. M.I. Chibisov, R.K. Janev  
Asymptotic theory of exchange interactions in ion-atom systems.  
Phys. Rep. 166, 1 (1988)
12. R.K. Janev  
Atomic collisions in fusion plasmas.  
J. de Physique (Paris) Coll. C1, T. 50, C1-421 (1989)
13. R.K. Janev  
Atomic processes in fusion plasmas.  
In: Invited lectures of XIX ICPIC (University of Belgrade, Belgrade, 1989) p. 264
14. R.K. Janev  
Atomic and molecular processes in fusion plasmas.  
Proc. Int. Symp. on Atomic and Molecular processes in Fusion Plasmas;  
Ed. H. Tawara, NIFS-DATA-Series 39, 3 (1996)
15. R.K. Janev  
Hidden crossing approach to inner-shell processes in ion-atom collisions.  
Nucl. Instruments & Methods, Phys. Res. B 124, 290 (1997)
16. R.K. Janev, E.A. Solov'ev  
Application of hidden crossing theory to positron-hydrogen atom collisions.  
In: Physics of Electronic and Atomic Collisions (Inv. lectures and progr. reports  
of XX Int. Conf. Physics of Electronic and Atomic Collisions),  
Eds. F. Aumayr, HP. Winter (World Scientific, Singapore, 1998) p. 393.
17. R.K. Janev  
Atomic and molecular processes in SOL / divertor plasmas  
Contrib. Plasma Physics 38, 307 (1998)
18. R.K. Janev, K.H. Becker, R.E.H. Clark, G. Lister, K. Niemax  
International coordination of atomic and molecular data efforts.  
In: Internat. Conf. on Atomic and Molecular Data and their Applications,

Eds. P.J. Mohr and W.L. Wiese (AIP, 434, 1998) p. 391.

19. R.K. Janev  
Role of dissociative recombination and related molecular processes in fusion edge plasmas.  
In: Dissociative Recombination IV: Theory, Experiment, Applications,  
Eds.:M.Larson et al., (World Scientific, Singapore, 2000), p. 245.
20. R.K. Janev  
Molecular processes in fusion edge plasmas.  
Proc. Int. Seminar At. Processes in Plasmas,  
Ed. T. Kato, NIFS-PROC-44 (1999), p. 57.
21. R.K.Janev  
Electron-molecule collisions in fusion divertor plasmas.  
Proc. Internat. Symp.Electr.-Mol.Collisions and Swarms,  
Eds. I.Fabrikant et al., (Univ.Nebraska, Lincoln,2001), p.49.
22. R.Celiberto, A.Laricchiuta, R.K.Janev  
Cross section data for hydrogen plasma applications.  
In: "Atomic and molecular data and their applications".  
Eds. D.R.Schultz et al. (AIP Conference Proceedings Series, Vol. 636, 2002) p. 277
23. R.K.Janev  
Atomic and molecular physics issues in current thermonuclear fusion research.  
Contemporary Physics, 46, 121 (2005)

24. D.Reiter, M.Baeva, O.Marchuk. R.K.Janev  
The role of atomic and molecular processes in magnetic fusion plasmas.  
In: “Atomic and molecular data and their applications”,  
Eds. T.Kato et al., (AIP Conference Proceedings Series, Vol. 771, 2006) p.3.
25. L.Ling, Y.Y.Qi, J.G.Wang, R.K.Janev  
Debye plasma effects on atomic structure and dynamics.  
In: “Atomic and molecular data and their applications”,  
Eds. S.P. Zhu, J. Yan (AIP Conf. Proc. Series, Vol. 1125, 2008) p.58.
26. R. Celiberto, I. Armenise, M.Cacciatore, M. Capitelli, P. Gamallo, R.K. Janev *et al.*  
Atomic and molecular data for spacecraft re-entry plasmas.  
Plasma Sources Sci. Technol. **25** (3), 033004 (2016)
27. R.K. Janev, S.B. Zhang, J.G. Wang  
A review of quantum collision processes in Debye plasmas.  
Matter and Radiation at Extremes (in press, 2016)

#### D. Articles in Refereed Journals

1. I.V. Komarov, R.K. Janev  
Molecular term splitting by two-electron exchange.  
Zh. Eksp. Teor. Fiz. 51, 1712 (1966)  
(Sov. Phys.-JETP, 24, 1259 (1967))
2. R.K. Janev  
Resonant charge exchange in  $H^-$  - H collisions.  
Ann. (Vestnik) Leningrad State Univ. 22, 61 (1967) (in Russian)
3. R.K. Janev  
A model for double nonresonant charge exchange.  
Zh. Eksp. Teor. Fiz. 52, 1221 (1967)  
(Sov. Phys. JETP 25, 812 (1967))
4. G.V. Dubrovskii, V.D. Ob'edkov, R.K.Janev  
Dissociative electron attachment on molecules and estimation of the width  
of quasi-stationary states.  
Zh. Theoret. Eksp. Khim. 3, 601 (1967) (in Russian)
5. R.K. Janev, S.S. Pestic  
The mobility of doubly charged ions in their parent gases.  
Proc. Phys. Soc. 92, 94 (1967)

6. R.K. Janev  
Coupling of direct and exchange scattering in slow ion-atom collisions.  
Fizika 1, 1 (1969)
7. R.K. Janev  
Optical-potential approach to high energy electron-atom collisions.  
Fizika 1, 173 (1969)
8. R.K. Janev  
Phase equation for the Jost function.  
Phys. Letts. 30A, 233 (1969)
9. D.M. Davidovic, R.K. Janev  
Resonant charge-exchange of negative ions in slow collisions with atoms.  
Phys. Rev. 186, (No. 1), 89 (1969)
10. S.S. Pesic, R.K. Janev, D.M. Davidovic  
Transport properties of negative ions in their parent gases.  
Phys. Rev. 186, 95 (1969)
11. R.K. Janev, V.D. Ob'edkov  
Evaluation of the electron affinity of Li by using an integral identity for the energy.  
Fizika 1, 233 (1969)
12. R.K. Janev, S.S. Pesic  
On the behavior of low-energy inelastic cross section for atomic reactions.  
J. Phys. B: 3, 369 (1970)
13. R.K. Janev, D.M. Davidovic, A.R. Tancic  
A simple model for Penning ionization.  
Fizika 2, 165 (1970)
14. R.K. Janev, V.D. Ob'edkov  
Adiabatic representation for the exchange inelastic electron-atom amplitude.  
Phys. Letts. 31A, 578 (1970)
15. R.K. Janev, Dj. Zivanovic  
A model for scattering of a particle on a bound system of particles.  
Phys. Letts. 33A, 127 (1970)
16. R.K. Janev, A.R. Tancic  
Electron detachment in H - H<sup>-</sup> and O - O<sup>-</sup> collisions.  
J. Phys. B: 4, 219 (1971)
17. R.K. Janev  
Atom-excited atom exchange interaction at large distances.  
J. Phys. B: 4, 215 (1971)



18. D.M. Davidovic, R.K. Janev  
The influence of short-range atomic forces on the molecular term splitting in  $(A, A^-)$  system. Application to  $O^- - O$  resonant charge exchange.  
Phys. Rev. A: 3, 604 (1971)
19. R.K. Janev, Dj. Zivanovic  
The use of the Green's function method for scattering of a particle on a system of bound particles.  
Fizika 3, 29 (1971)
20. R.K. Janev, A. Salin  
Charge-exchange in hydrogen atom collisions.  
J. Phys. B: 4, 127 (1971)
21. R.K. Janev, D.M. Davidovic, I.V. Terzic  
Transition rates of nonradiative resonant processes in the interaction of  $Li^+$  and  $Na^+$  ions with Li, W, and Mo surfaces.  
Surface Science 26, 142 (1972)
22. R.K. Janev, A. Salin  
Faddeev-Lovelace equations in the eikonal approximation.  
Annals of Physics (N.Y.) 73, 136 (1972)
23. R.K. Janev, A. Salin  
Exchange interaction between ionic and covalent states of two atoms at large distances  
J. Phys. B: 5, 177 (1972)
24. M.A. Burnashev, R.K. Janev, V.D. Ob'edkov  
Inelastic e-H and e-He collisions in the adiabatic approximation  
Fizika 4, 157 (1972)
25. R.K. Janev, A. Salin  
Electron capture from hydrogen negative ions by fast protons.  
Fizika 4, 165 (1972)
26. R.K. Janev, Dz. S. Belkic  
Muonium formation in slow collisions of positive mesons with hydrogen atoms.  
J. Phys. B: 5, L237 (1972)
27. R.K. Janev, A.R. Tancic  
Recombination of  $H^+$  and  $H^-$  ions in slow collisions.  
J. Phys. B: 5, L250 (1972)
28. G.F. Drukarev, V.D. Ob'edkov, R.K. Janev  
Polarization effects in Penning ionization.  
Phys. Letts. 42A, 213 (1972)

29. R. Gayet, R.K. Janev, A. Salin  
Electron detachment from negative ions by charged particle collisions: I. Proton impact.  
J. Phys. B: 6, 993 (1973)
30. Dz. S. Belkic, R.K. Janev  
Electron capture from hydrogen and helium atoms  
by fast alpha particles.  
J. Phys. B: 6, 1020 (1973)
31. M.Ya. Amusia, N.A. Cherepkov, R.K. Janev, Dj. Zivanovic  
The role of many-electron correlations in fast  
electron-atom inelastic collisions.  
J. Phys. B: 6, 1028 (1973)
32. Dz.S. Belkic, R.K. Janev  
Formation of muonium in fast collisions of  $\mu^+$  mesons with atomic systems.  
J. Phys. B: 6, 2613 (1973)
33. R.K. Janev, Lj. Petkovski  
Reaction rate coefficient for radiative electron attachment on  $2S_{1/2}$  atoms.  
Fizika 5, 155 (1973)
34. R.K. Janev, Z. Maric  
Perturbation of the spectrum of three-dimensional harmonic  
oscillator by a  $\delta$ -potential.  
Phys. Letts. 46A, 313 (1974)
35. M.Ya. Amusia, N.V. Cherepkov, R.K. Janev, Dj. Zivanovic  
On the problem of existence of collective oscillations in atoms.  
J. Phys. B: 7, 1435 (1974)
36. R.K. Janev  
Interaction of atomic particles with a solid state surface:  
I. Resonance processes.  
J. Phys. B: 7, 1506 (1974)
37. R.K. Janev  
Interaction of atomic particles with a solid state surface:  
II. Resonant ionization of hydrogen-like atoms.  
J. Phys. B: 7, L359 (1974)
38. R.K. Janev  
Destruction of negative ions near a solid state surface.  
Surface Science 45, 609 (1974)
39. R.K. Janev, H. van Regemorter  
Negative ion formation by radiative electron attachment on atoms.

- Astronomy and Astrophysics 37, 1 (1974)
40. R.K. Janev  
Rate coefficient for  $H + H^- \rightarrow H + H + e$  reaction  
Astronomy and Astrophysics 35, 161 (1974)
  41. R.K. Janev  
The effect of an external magnetic field on resonant neutralization of negative ions near a solid surface.  
Surface Science 47, 583 (1975)
  42. R.K. Janev  
On the long-range configuration interaction between ionic and covalent states.  
J. Chem. Phys. 64, 1891 (1976)
  43. T.P. Grozdanov, R.K. Janev  
Interaction of atomic particles with a solid surface:  
III. Electron tunneling processes in presence of an external electric field.  
J. Phys. B: 10, 1385 (1977)
  44. R.K. Janev, Z.M. Radulovic  
Recombination of alkali positive and halogen negative ions.  
J. Chem. Phys. 67, 2856 (1977)
  45. T.P. Grozdanov, R.K. Janev  
Charge exchange collisions of multiply charged ions with atoms  
Phys. Rev. A: 17, 880 (1978)
  46. R.K. Janev, Z.M. Radulovic  
Ion-ion recombination and ion-pair formation processes in alkali-hydrogen diatomic systems.  
Phys. Rev. A: 17, 889 (1978)
  47. T.P. Grozdanov, R.K. Janev  
Survival probabilities of excited particles emerging from metal surfaces.  
Phys. Letts. 65A, 396 (1978)
  48. T.P. Grozdanov, R.K. Janev  
One-electron capture in slow collisions of highly charged ions with atoms.  
Phys. Letts. 66A, 191 (1978)
  49. T.P. Grozdanov, R.K. Janev  
Quasi-stationary spectrum of hydrogen-like atoms near a solid state surface.

Fizika 10, 249 (1978)

50. R.K. Janev, A.A. Mihajlov  
Excitation and deexcitation processes in slow collisions of Rydberg atoms with ground state parent atoms.  
Phys. Rev. A: 20, 1890 (1979)
51. T.P. Grozdanov, R.K. Janev  
Electron capture in slow collisions of multiply charged ions with hydrogen molecules.  
J. Phys. B: 13, L69 (1979)
52. R.K. Janev, A.A. Mihajlov  
Resonant ionization in slow atom-Rydberg atom collisions.  
Phys. Rev. A: 21, 819 (1980)
53. R.K. Janev, S.B. Vojvodic  
Survival probabilities of hydrogen negative ions emerging from Cs-coated W and Ni surfaces  
Phys. Letts. 75A, 348 (1980)
54. R.K. Janev, L.P. Presnyakov, V.P. Shevelko  
One-electron capture from the inner shells in atom-multicharged ion collisions  
Phys. Letts. 76A, 121 (1980)
55. R.K. Janev, S.B. Vojvodic  
Interaction of atomic particles with solid surfaces:  
IV. One-electron resonant processes in the presence of a surface sub-monolayer.  
J. Phys. B: 13, 2481 (1980)
56. T.P. Grozdanov, R.K. Janev  
Two-electron capture in slow ion-atom collisions.  
J. Phys. B: 13, 3431 (1980)
57. R.K. Janev, L.P. Presnyakov  
Single-electron excitation and ionization processes in atom-multicharged ion collisions.  
J. Phys. B: 13, 4233 (1980)
58. I.V. Komarov, T.P. Grozdanov, R.K. Janev  
Influence of the core potential on the alkali atom Rydberg levels.  
J. Phys. B: 13, L573 (1980)
59. R.K. Janev  
Ionization and electron loss of hydrogen atoms by highly charged ions.  
Physica Scripta 23, 180 (1981)
60. R.K. Janev, N.N. Nedeljkovic

Interaction of atomic particles with solid surfaces:

V. Auger de-excitation of metastable atoms.

J. Phys. B: 14, 2995 (1981)

61. A.A. Mihajlov, R.K. Janev  
Ionization in atom-Rydberg atom collisions:  
ejected electron energy spectra and reaction rate coefficients.  
J. Phys. B: 14, 1639 (1981)
62. R.K. Janev  
Impact-ionization of helium atoms by multiply charged ions.  
Phys. Letts. 83A, 5 (1981)
63. L.P. Presnyakov, D.B. Uskov, R.K. Janev  
New analytic approach to the theory of charge exchange in atom-  
multicharged ion collisions.  
Phys. Letts. 84A, 243 (1981)
64. R.K. Janev, P. Hvelplund  
On the scaling laws for charge exchange, ionization, and electron loss in  
collisions of atoms with highly charged ions.  
Comments At. Mol. Phys. 11, 75 (1981)
65. R.K. Janev, D.S. Belic  
Resonant double charge exchange  
in ion-ion collisions.  
Phys. Letts. 89A, 190 (1982)
66. R.K. Janev, C.J. Joachain, N.N. Nedeljkovic  
Molecular energy splitting of highly excited states  
in the two-Coulomb-center problem.  
Phys. Rev. A: 26, 116 (1982)
67. R.K. Janev, D.S. Belic  
Quasi-resonant charge exchange in low-energy collisions  
between multiply charged ions.  
J. Phys. B: 15, 3479 (1982)
68. L.P. Presnyakov, D.B. Uskov, R.K. Janev  
Charge transfer in slow collisions of multiply charged ions with atoms.  
Zh. Eksp. Teor. Fiz. 83, 933 (1982)  
[Sov. Phys. JETP 56, 524 (1982)]
69. R.K. Janev  
General classical scaling of electron-loss cross sections  
in atom-highly charged ion collisions.  
Phys. Rev. A: 28, 1810 (1983)

70. R.K. Janev, D.S. Belic  
Capture into excited states in  $H + Ar^{18+}$ ,  $Kr^{36+}$ , and  $Xe^{54+}$  charge transfer collisions.  
*Physica Scripta* T3, 246 (1983)
71. R.K. Janev, D.S. Belic, B.H. Bransden  
Total and partial cross sections for electron capture in collisions of hydrogen atoms with fully stripped ions.  
*Phys. Rev. A*: 28, 1293 (1983)
72. R.K. Janev  
Electron capture into excited states in collisions of highly charged ions with atoms.  
*Comments At. Mol. Phys.* 12, 277 (1983)
73. R.K. Janev, B.H. Bransden, J.W. Gallagher  
Evaluated theoretical cross section data for charge exchange in collisions of atoms with multiply charged ions: I. Hydrogen atom - fully stripped ion systems.  
*J. Phys. Chem. Ref. Data* 12, 829 (1983)
74. J.W. Gallagher, B.H. Bransden, R.K. Janev  
Evaluated theoretical cross section data for charge exchange in collisions of atoms with multiply charged ions:  
II. Hydrogen atom - incompletely stripped ion systems.  
*J. Phys. Chem. Ref. Data* 12, 873 (1983)
75. R.K. Janev, J.W. Gallagher  
Evaluated theoretical cross section data for charge exchange in collisions of atoms with multiply charged ions:  
III. Non-hydrogen atom targets.  
*J. Phys. Chem. Ref. Data* 13, 1199 (1984)
76. R.K. Janev, D. Post, W. Langer, K. Evans, D. Heifetz, J. Weisheit  
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*J. Nucl. Mater.* 121, 10 (1984)
77. R.K. Janev, C.J. Joachain, N.N. Nedeljkovic  
Resonant electron transfer in slow collisions of protons with Rydberg hydrogen atoms.  
*Phys. Rev. A*: 29, 2463 (1984)
78. C.D. Boley, R.K. Janev, D.E. Post  
Enhancement of the neutral beam stopping cross section in fusion plasma due to multistep collision processes.  
*Phys. Rev. Letts.* 52, 534 (1984)
79. N.N. Nedeljkovic, C.J. Joachain, R.K. Janev  
Decay of Rydberg states in the field of a highly charged ion.

- Phys. Letts. 100A, 21 (1984)
80. M.R.C. McDowell, R.K. Janev  
Electron capture, ionization and transfer-ionization in fast  
 $\text{Au}^{q+} + \text{He}$  collisions.  
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#### **E. Invited Talks at International Conferences**

1. Modern methods in the theory of heavy particle collisions.  
 IV SPIG, Herceg-Novci, 1968 (published, see C. 1)
2. Inelastic processes in slow collisions of highly excited atoms with ground state atoms.  
 VII All-Union Conf. Electron. Atom. Collisions, Petrozavodsk, USSR, 1978 (unpublished)
3. Atomic and molecular processes involving ionic-covalent nonadiabatic coupling.  
 IX SPIG, Dubrovnik, 1978 (published, see C. 3)
4. Charge exchange in slow ion-atom collisions.  
 Nordic Summer School on Atomic Collision Processes, Sandbjerg Manor, Denmark,  
 August 1980 (unpublished)
5. Charge exchange processes in atom-multicharged ion collisions.  
 X SPIG, Dubrovnik, 1980 (published, see C. 4) (with T.P. Grozdanov)
6. Excited states created in charge transfer collisions between atoms and highly charged ions  
 Symposium on Production and Physics of Highly Charged Ions, Stockholm, 1982 (published, see  
 C. 8)
7. A critical review of theoretical cross section data for charge exchange in collisions  
 of hydrogen atoms with highly charged ions.  
 IAEA RCM on "Atomic Data for Fusion Plasma Diagnostics", Vienna, 1982 (with B.H.

- Brandsen) (published, C.6)
8. Charge transfer processes in fusion plasmas.  
RAL/JET workshop on Atomic Physics of Fusion Plasmas, Abingdon, 1984 (unpublished)
  9. Atomic physics aspects of particle transport in fusion plasmas.  
XII SPIG, Sibenik, 1984 (published, see B. 1) (with D.E. Post)
  10. Influence of excited states on neutral beam heating on controlled fusion plasma experiments.  
8th Conf. Application of Accelerators in Research and Industry, Denton, TX 1984  
(unpublished) (with D. Post, C. Boley and R. Wieland)
  11. Theory of charge-exchange and ionization in ion-atom (ion) collisions.  
2 nd Intern. Symposium on Electron-Ion and Ion-Ion Collisions,  
Han sur Less, Belguim, 1985); (published, see B. 2)
  12. Collision processes involving excited species in fusion edge plasmas.  
IAEA Specialists' Meeting on Atomic and Molecular Data for Plasma Edge Studies,  
Vienna, 8-10 July 1987 (unpublished)
  13. Atomic and molecular processes in tokamak edge plasmas.  
IX ESCAMPIG, Lisbon, August 1988 (unpublished;  
Abstract in: ECA-Series, Vol. 12-H, P.36 (1988))
  14. Atomic collisions for fusion: A review.  
IV International conference on the physics of multiply charged ions  
Grenoble, September 1988 (published, see C. 13)
  15. Dynamic processes involving quasi-stationary states.  
International conference on spectroscopy and collisions of few-electron ions  
Bucharest, September 1988 (with P.S. Krstic, published, see B. 3)
  16. Energetic neutral beam penetration in fusion reactor plasmas.  
All-Union Seminar on "Toroidal Systems in Controlled Fusion",  
Dubna, USSR, February 20-24 (1989) (unpublished)
  17. Atomic physics database for neutral beam stopping cross sections.  
ITER Workshop on "Current Drive and Heating Physics",  
Garching, June 12-16 (1989) (unpublished)
  18. Atomic processes in fusion plasmas.  
XIX Int. Conf. Phenomena Ioniz. Gases  
Belgrade, July 10-14, 1989, (published, see C. 14)
  19. Atomic and molecular data for controlled thermonuclear fusion.  
Belgian Physical Society Meeting,

Mons, Belgium, May 26-27, 1994, (unpublished)

20. Atomic and molecular processes in fusion plasmas.  
Int. Symposium on Atomic and Molecular Processes in fusion plasmas.  
Nagoya, NIFS, Sept. 17-19, 1996, (published; see C.15)
21. Hidden crossings approach to inner-shell ion-atom collision processes.  
6th Workshop on Fast Ion-Atom Collisions  
Debrecen (Hungary), Sept. 4-6, 1996, (published, see C.16)
22. Application of hidden crossing theory to positron-hydrogen atom collisions.  
(with E.A. Solov'ev)  
XX Internat. Conf. Physics of Electronic and Atomic Collisions,  
Vienna (Austria), July 23-29, 1999, (published, see C. 17)
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