



## Personal information

First name / Surname	<b>Zdravko Lenac</b>
Address	Diraki 4; 51000 Rijeka; Croatia
Telephone	+385 51 406500 +385 91 1375871
Fax	*385 51 216671
E-mail	zlenac@uniri.hr ; zdravko.lenac@ri.t-com.hr
Nationality	Croatian
Date of birth	January 19, 1949.
Gender	Male
Registration number of scientist	025722

## Work experience

Dates	2013. – 2015.
Occupation or position held	Member of Permanent Committee for Natural Sciences
Main activities and responsibilities	Natural sciences
Name and address of employer	Croatian Science Foundation
Dates	2009. - present
Occupation or position held	Director for EU Projects and Innovation
Main activities and responsibilities	Innovation and development
Name and address of employer	University of Rijeka
Dates	2009 - 2014
Occupation or position held	Deputy Head of the Department of Physics
Main activities and responsibilities	Science and teaching
Name and address of employer	Department of Physics, University of Rijeka
Dates	2002. - present
Occupation or position held	President of the Governing Council
Main activities and responsibilities	Monitoring and support
Name and address of employer	University Library, University of Rijeka
Dates	2001- present
Occupation or position held	Full Professor (permanently)
Main activities and responsibilities	Theoretical physics
Name and address of employer	University of Rijeka ; Department of Physics, University of Rijeka

Dates	2000 - 2009
Occupation or position held	Vice-Rector of the University of Rijeka
Main activities and responsibilities	Science, research and development
Name and address of employer	University of Rijeka

Dates	1997 - 2000
Occupation or position held	Full Professor
Main activities and responsibilities	Theoretical physics
Name and address of employer	Faculty of Philosophy, University of Rijeka

Dates	1994 - 1996
Occupation or position held	Head of Mathematical and Physical Society, Rijeka
Main activities and responsibilities	Popularization of mathematics and physics, organization of seminars
Name and address of employer	Mathematical and Physical Society, Rijeka

Dates	1992 - 2000
Occupation or position held	Member of Committee for scholarships in highly sophisticated programs
Main activities and responsibilities	Determining the rules and choosing the candidates for the scholarships
Name and address of employer	Primorsko-Goranska County

Dates	1992 - 2000
Occupation or position held	Member of Parent Committee for Physics
Main activities and responsibilities	Scientific promotions in physics
Name and address of employer	Ministry of Science and Technology, Zagreb

Dates	1992 - 1998
Occupation or position held	Member of Scientific Council for Natural Sciences of Ministry of Science and Technology; Member of Scientific Council of Ministry of Science and Technology
Main activities and responsibilities	Development of science in Croatia, particularly natural sciences
Name and address of employer	Ministry of Science and Technology, Zagreb

Dates	1992 - 1995
Occupation or position held	Member of the Organizing Committee of the Summer Schools of Young Croatian Physicists
Main activities and responsibilities	Organizing (three) Summer schools
Name and address of employer	Croatian Physical Society, Zagreb

Dates	1988 -2000.
Occupation or position held	Vice-Dean for teaching; science; business relations
Main activities and responsibilities	teaching; research; development
Name and address of employer	Faculty of Philosophy, University of Rijeka

Dates	1988. – 1997.
Occupation or position held	Associate Professor
Main activities and responsibilities	Theoretical physics
Name and address of employer	Faculty of Philosophy, University of Rijeka

Dates	1981. - 1988.
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Occupation or position held	Assistant Professor
Main activities and responsibilities	Theoretical physics
Name and address of employer	Faculty of Philosophy, University of Rijeka

## Education and training

Dates	1976 -1980
Title of qualification awarded	PhD degree in Physics
Principal subjects/Occupational skills covered	Theoretical solid state physics
Name and type of organisation providing education and training	Faculty of Science, University of Zagreb

Dates	1973 - 1975
Title of qualification awarded	M.Sc degree in Physics
Principal subjects/Occupational skills covered	Theoretical solid state physics
Name and type of organisation providing education and training	University of Zagreb

Dates	1968 -1973
Title of qualification awarded	B.Sc degree in Physics
Principal subjects/Occupational skills covered	Theoretical solid state physics
Name and type of organisation providing education and training	Faculty of Science, University of Zagreb

## Personal skills and competences

Mother tongue 

Croatian
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Other language(s)

Tongue	English
Speaking	Yes
Writing	Yes
Reading	Yes

Social skills and competences 

Member of "Universitas", public association for the promotion of higher education
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Organisational skills and competences 

Course: University management, Atlanta University, USA Course: Microsoft course for University Management, University of Rijeka Responsible person for several EU projects implemented at the University of Rijeka
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Technical skills and competences 

Writing and leading EU projects
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Artistic skills and competences 

Photography
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Other skills and competences 

Skiing, sailing
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Driving licence 

Standard (B)
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**Additional information**

**Membership of professional bodies**

- Council of the UniAdrion Virtual University
- ALADIN Advisory Board
- Mathematical and Physical Society, Rijeka
- Croatian Physical Society

**Teaching responsibilities**

Theoretical physics:

- Quantum mechanics
- Solid state physics
- Classical electrodynamics

**Annexes**

**List of papers indexed in Current Contents**

1. Z. Lenac, M.Šunjić: Quantum-mechanical approach to the point-charge capacitor problem,  
Il Nuovo Cimento 33 B (1976) 681.
2. D.Šokčević, Z.Lenac, R.Brako: Excitation of adsorbed molecule vibrations in low-energy electron scattering,  
Z.Physik B 28 (1977) 273.
3. M.Šunjić, R.Brako, Z.Lenac, D.Šokčević: Theory of low-energy electron spectroscopy of adsorbed molecule vibrations,  
Inter.Journal of Quantum Chemistry 12 (1977) 59.
4. Z.Lenac, M.Šunjić: The properties of a parallel-plate capacitor in a plasma model,  
Z.Physik B 33 (1979) 145.
5. Z.Lenac, M.Šunjić, D.Šokčević, R.Brako: Low-energy scattering by molecules adsorbed on metal surfaces,  
Surface Sci. 80 (1979) 602.
6. M.S.Tomaš, Z.Lenac: Thickness dependence of the surface-polariton relaxation rates in a crystal slab,  
Solid State Commun. 44 (1982) 937.
7. Z.Lenac, M.S.Tomaš: Damping properties of surface polaritons in a thin crystal slab,  
J.Phys. C 16 (1983) 4273.
8. M.S.Tomaš, Z.Lenac: Long-range surface polaritons in a supported thin metallic slab,  
Solid State Commun. 50 (1984) 915.
9. Z.Lenac, M.S.Tomaš: Attenuation of long-range surface polaritons in a thin metallic slab with a dielectric coating,  
Surface Sci. 154 (1985) 639.
10. M.S.Tomaš, Z.Lenac: Coupled surface polariton with guided wave polariton modes in asymmetric metal clad dielectric waveguides,  
Optics Commun. 55 (1985) 267.
11. Z.Lenac, M.Šunjić: The theory of electron scattering from multipolar vibrations of adsorbates,  
J.Chem.Phys. 85 (1986) 3058.
12. Z.Lenac, M.S.Tomaš: Absorption of surface polaritons by molecules near the surface of a metallic slab,  
Solid State Commun. 61 (1987) 261.
13. M.S.Tomaš, Z.Lenac: Scattering of surface polaritons by molecules near a metallic slab surface,  
Surface Sci. 189/190 (1987) 543.
14. Z.Lenac, M.Šunjić, H.Conrad, M.E.Kordesch: Image-potential states on clean and hydrogen-covered Pd surfaces: Analysis of a one-dimensional model,  
Phys.Rev. B 36 (1987) 9500.
15. J.Koukal, M.Šunjić, Z.Lenac, H.Conrad, W.Stenzel, M.E.Kordesch: Unoccupied surface states on Pd (111) observed in VLEED and inverse photoemission: Theoretical interpretation,

- Phys.Rev. B 39 (1989) 4911.
16. Z.Lenac, M.S.Tomaš: Enhanced molecular fluorescence mediated by long-range surface polaritons,  
Surface Sci. 215 (1989) 299.
  17. B.Trninić-Rađa, M.Šunjić, Z.Lenac: Image-potential states on dielectric-covered metal surfaces: Variational versus numerical approach,  
Phys.Rev. B 40 (1989) 9600.
  18. M.Šunjić, Z.Lenac: Finite-size effects in Wigner crystallization of electrons on liquid-helium layers,  
Europhys.Lett. 11 (1990) 431.
  19. Z.Lenac, M.Šunjić: Hartree model of electrons in a two-dimensional Wigner lattice on a dielectric substrate,  
Phys.Rev. B 43 (1991) 6049.
  20. M.S.Tomaš, Z.Lenac: Enhanced Raman scattering in four-layered ATR configuration,  
Surface Sci. 251/252 (1991) 310.
  21. Z.Lenac, M.S.Tomaš: Interference effects in Raman scattering from overlayers on metals,  
J.Raman spec. 22 (1991) 831.
  22. Z.Lenac, M.Šunjić: Dynamical properties and Wigner transitions of two-dimensional electron lattices on dielectric substrates,  
Phys.Rev. B 44 (1991) 11465.
  23. Z.Lenac, M.Šunjić: Delocalized Wigner lattice on a dielectric layer with a metallic substrate: Dynamical properties and phase transitions,  
Phys.Rev. B 46 (1992) 7821.
  24. M.S.Tomaš, Z.Lenac: Damping of a dipole in planar microcavities,  
Optic Commun. 100 (1993) 259.
  25. Z.Lenac, M.Šunjić: Excitation spectrum of a two-dimensional Wigner lattice,  
Phys.Rev. B 48 (1993) 14496.
  26. Z.Lenac, M.Šunjić: Correlation energy of a two-dimensional electron gas,  
Phys.Rev. B 50 (1994) 10792.
  27. Z.Lenac, M.Šunjić: Melting of the Wigner lattice at  $T=0$ ,  
Phys.Rev. B 52 (1995) 11238.
  28. Z.Lenac, M.Šunjić: The  $T=0$  phase transition of strictly two-dimensional electrons,  
Europhys.Lett. 38 (1997) 201
  29. M.S.Tomaš, Z.Lenac: Decay of excited molecules in absorbing planar cavities,  
Phys.Rev. A 56 (1997) 4197
  30. Z.Lenac, M.Šunjić: Polaron in the Wigner Lattice,  
Phys.Rev. B 59 (1999) 6752
  31. M.S.Tomaš, Z.Lenac: Spontaneous-emission in an absorbing Fabry-Perot cavity,  
Phys.Rev. A 60 (1999) 2431
  32. Z.Lenac, M.S.Tomaš: Spontaneous emission from a Wigner crystal,  
Surface Science 454-456 (2000) 1085
  33. Z.Lenac: Polarization vectors in a 2D Wigner crystal,  
Vacuum 61 (2001) 101
  34. Z.Lenac: Spontaneous emission from a quasi-two-dimensional Wigner crystal in a multilayer configuration,  
Phys.Rev. A 63 (2001) 033815
  35. Z.Lenac: Quantum optic of dispersive dielectric media,  
Phys.Rev. A 68 (2003) 063815
  36. Z.Lenac: Interaction of electromagnetic field with electrons in a Wigner crystal,  
Phys.Rev. B 71 (2005) 035330
  37. Z.Lenac: Polaritons of dispersive dielectric media,  
Vacuum 80 (2005) 198
  38. Z.Lenac: Comment on Surface Plasmon Modes and the Casimir Energy,  
Phys.Rev.Lett. 96 (2006) 218901
  39. Z.Lenac, M.S.Tomaš: Influence of external boundaries on the Casimir effect between metallic plates,  
Phys.Rev. A 75 (2007) 042101
  40. Z.Lenac, M.S.Tomaš: Casimir force on a thin slab: The influence of surrounding media and the role of surface polariton,,  
Phys.Rev. A 78 (2008) 023834
  41. M.S.Tomaš, Z.Lenac: Casimir pressure on a thin metallic slab,  
J.Phys. Conf.Ser. 161 (2009) 012017

42. Z.Lenac: Casimir pressure in a multilayer system with a fixed total length,  
Phys.Rev. A 82 (2010) 022117
43. Z.Lenac, Ž.Crljen: Wigner lattice between two dielectric slabs: Image potential and Casimir effect,  
Phys.Rev. A 86 (2012) 022524