

Ruvín Ferber

List of Publications by Year in descending order

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114
papers

1,971
citations

236925

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345221

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116
all docs

116
docs citations

116
times ranked

786
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1 | Observation and modeling of bound-free transitions to the $X^1\Sigma^+$ and $a^3\Sigma^+$ states of KCs. Journal of Chemical Physics, 2022, 156, 114305. | 3.0 | 3 |
| 2 | The $a^3\Sigma^+$ state of KCs revisited: Hyperfine structure analysis and potential refinement. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 283, 108124. | | |
| 3 | Cross-relaxation studies with optically detected magnetic resonances in nitrogen-vacancy centers in diamond in external magnetic field. Physical Review B, 2021, 103, . | 3.2 | 3 |
| 4 | Fourier-transform spectroscopy and relativistic electronic structure calculation on the $c^3\Sigma^+$ state of KCs. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107902. | | |
| 5 | A Numbers-Based Approach to a Free Particle's Proper Spacetime. Foundations of Physics, 2021, 51, 1. | 1.3 | 0 |
| 6 | The branching ratio of intercombination $A^1\Sigma^+$ and $A^3\Sigma^+$ states of RbCs . Physical Review A, 2021, 103, . | | |
| 7 | Dynamic $N^1\Sigma^+$ nuclear spin polarization in RbCs . Physical Review A, 2021, 103, . | 3.2 | 14 |
| 8 | Fourier-transform spectroscopy, relativistic electronic structure calculation, and coupled-channel deperturbation analysis of the fully mixed $A^1\Sigma^+$ and $A^3\Sigma^+$ states of RbCs . Physical Review A, 2021, 103, . | 2.5 | 9 |
| 9 | Hyperfine level structure in nitrogen-vacancy centers near the ground-state level anticrossing. Physical Review B, 2019, 100, . | 3.2 | 14 |
| 10 | Line Identification of Atomic and Ionic Spectra of Holmium in the Visible Spectral Range. II. Spectrum of Ho ii and Ho iii. Astrophysical Journal, Supplement Series, 2019, 240, 28. | 7.7 | 10 |
| 11 | Line Identification of Atomic and Ionic Spectra of Holmium in the Visible Spectral Range. I. Spectrum of Ho i. Astrophysical Journal, Supplement Series, 2019, 240, 27. | 7.7 | 13 |
| 12 | Detection of magnetic thin film impurity phases using nitrogen vacancy centers in diamond crystal. , 2019, , . | | 0 |
| 13 | Fourier-transform spectroscopy, direct potential fit, and electronic structure calculations on the entirely perturbed $(4) \Sigma^+$ state of RbCs . Physical Review A, 2019, 80, . | 2.5 | 1 |
| 14 | Line Identification of Atomic and Ionic Spectra of Holmium in the Near-UV. II. Spectra of Ho ii and Ho iii. Astrophysical Journal, Supplement Series, 2017, 228, 17. | 7.7 | 11 |
| 15 | Line Identification of Atomic and Ionic Spectra of Holmium in the Near-UV. Part I. Spectrum of Ho i. Astrophysical Journal, Supplement Series, 2017, 228, 16. | 7.7 | 16 |
| 16 | Level anti-crossing magnetometry with color centers in diamond. Proceedings of SPIE, 2017, , . | 0.8 | 10 |
| 17 | Energy and radiative properties of the $(3) \Sigma^+$ and $(5) \Sigma^+$ states of RbCs : Experiment and theory. Physical Review A, 2017, 96, . | 2.5 | 5 |
| 18 | Colloidal nanoparticle sorting and ordering on anodic alumina patterned surfaces using templated capillary force assembly. Surface and Coatings Technology, 2017, 326, 264-269. | 4.8 | 10 |

| # | ARTICLE | IF | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Fluorescent nanodiamond array deposition on porous anodized aluminum oxide using asperity assisted capillary force assembly. Proceedings of the Estonian Academy of Sciences, 2017, 66, 416. | 1.5 | 2 |
| 20 | Fourier-transform spectroscopy and deperturbation analysis of the spin-orbit coupled $A^1\Sigma^+$ and $B^3\Sigma^+$ states of KRb. Journal of Chemical Physics, 2016, 144, 144310. | 3.0 | 15 |
| 21 | Ab initio multi-reference perturbation theory calculations of the ground and low-lying electronic states of the KRb molecule. Computational and Theoretical Chemistry, 2016, 1089, 35-42. | 2.5 | 13 |
| 22 | Spatial dynamics of laser-induced fluorescence in an intense laser beam: An experimental and theoretical study with alkali-metal atoms. Physical Review A, 2016, 93, . | 2.5 | 2 |
| 23 | Estimating the magnetic moment of microscopic magnetic sources from their magnetic field distribution in a layer of nitrogen-vacancy (NV) centres in diamond. EPJ Applied Physics, 2016, 73, 20701. | 0.7 | 9 |
| 24 | Alignment-to-orientation conversion in a magnetic field at nonlinear excitation of the D2 line of rubidium: Experiment and theory. Physical Review A, 2015, 91, . | 2.5 | 8 |
| 25 | Longitudinal spin-relaxation in nitrogen-vacancy centers in electron irradiated diamond. Applied Physics Letters, 2015, 107, . | 3.3 | 32 |
| 26 | HIGH-RESOLUTION FOURIER TRANSFORM SPECTROSCOPY OF Nb i IN THE NEAR-INFRARED. Astrophysical Journal, Supplement Series, 2015, 221, 14. | 7.7 | 9 |
| 27 | Relaxation mechanisms affecting magneto-optical resonances in an extremely thin cell: Experiment and theory for the cesium D1 line. Physical Review A, 2015, 91, . | 2.5 | 6 |
| 28 | Investigation of the hyperfine structure of weak atomic Vanadium lines by means of Fourier transform spectroscopy. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 115005. | 1.5 | 9 |
| 29 | Laser synthesis of ultracold alkali metal dimers: optimization and control. Russian Chemical Reviews, 2015, 84, 1001-1020. | 6.5 | 42 |
| 30 | Fourier-transform spectroscopy and potential construction of the $(2)1\Sigma^+$ state in KCs. Journal of Chemical Physics, 2015, 142, 134309. | 3.0 | 9 |
| 31 | Magnetic Field Gradiometer with Sub-Micron Spatial Resolution Based on Caesium Vapour in an Extremely Thin Cell. Latvian Journal of Physics and Technical Sciences, 2015, 52, 3-10. | 0.6 | 0 |
| 32 | Potential construction of the $B(1)1\Sigma^+$ state in KCs based on Fourier-Transform spectroscopy data. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 151, 1-4. | 2.3 | 9 |
| 33 | HYPERFINE STRUCTURE CONSTANTS OF ENERGETICALLY HIGH-LYING LEVELS OF ODD PARITY OF ATOMIC VANADIUM. Astrophysical Journal, Supplement Series, 2014, 214, 9. | 7.7 | 15 |
| 34 | Extended Fourier-transform spectroscopy studies and deperturbation analysis of the spin-orbit coupled $A^1\Sigma^+$ and $B^3\Sigma^+$ states in RbCs. Journal of Chemical Physics, 2014, 141, 184309. | 3.0 | 16 |
| 35 | Fourier-transform spectroscopy and potential construction of the $(2)1\Sigma^+$ state in KCs. Journal of Chemical Physics, 2015, 142, 134309. | | |
| 36 | Fourier-transform spectroscopy of $(4)1\Sigma^+ \hat{a}^+$ $A^1\Sigma^+ \hat{a}^+$ $B^3\Sigma^+$, $A^1\Sigma^+ \hat{a}^+$ $B^3\Sigma^+$ and $B^3\Sigma^+ \hat{a}^+$ $X^1\Sigma^+$ transitions in KCs and deperturbation treatment of $A^1\Sigma^+$ and $B^3\Sigma^+$ states. Journal of Chemical Physics, 2013, 139, 244301. | 3.0 | 22 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | <p>Experimental studies of the $X^1\Sigma^+$ state of RbCs and modeling of the optical cycle for ultracold $X^1\Sigma^+$ molecules. Physical Review A, 2013, 87, .</p> | 2.5 | 9 |
| 38 | <p>Fourier-transform spectroscopy and description of low-lying energy levels in the $(1)1^1\Sigma^+$ state of RbCs. Journal of Chemical Physics, 2013, 138, 154304.</p> | 3.0 | 9 |
| 39 | <p>HIGH-RESOLUTION FOURIER TRANSFORM SPECTROSCOPY OF LANTHANUM IN Ar DISCHARGE IN THE NEAR-INFRARED. Astrophysical Journal, Supplement Series, 2013, 208, 18.</p> | 7.7 | 25 |
| 40 | <p>Dependence of the shapes of nonzero-field level-crossing signals in rubidium atoms on the laser frequency and power density. Physical Review A, 2013, 87, .</p> | 2.5 | 7 |
| 41 | <p>Long-range coupling of $X^1\Sigma^+$ and $A^1\Sigma^+$ states of RbCs. Physical Review A, 2012, 85, .</p> | 2.5 | 19 |
| 42 | <p>Coherent and incoherent processes responsible for various characteristics of nonlinear magneto-optical signals in rubidium atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 185003.</p> | 1.5 | 1 |
| 43 | <p>Modeling of the $X^1\Sigma^+$ state of RbCs. Physical Review A, 2012, 85, .</p> | 2.5 | 6 |
| 44 | <p>Conversion of bright magneto-optical resonances into dark resonances at fixed laser frequency for D2 excitation of atomic rubidium. Physical Review A, 2012, 85, .</p> | 2.5 | 18 |
| 45 | <p>$(1)1^1\Sigma^+$ state of KCs: High-resolution spectroscopy and description of low-lying energy levels. Journal of Chemical Physics, 2012, 136, 064304.</p> | 3.0 | 17 |
| 46 | <p>Modeling of the $X^1\Sigma^+$ state of RbCs. Physical Review A, 2012, 85, .</p> | 2.5 | 22 |
| 47 | <p>Fourier transform spectroscopy and direct potential fit of a shelflike state: Application to $(4)1^1\Sigma^+$ + KCs. Journal of Chemical Physics, 2011, 134, 104307.</p> | 3.0 | 29 |
| 48 | <p>Singlet and triplet potentials of the ground-state atom pair RbCs studied by Fourier-transform spectroscopy. Physical Review A, 2011, 83, .</p> | 2.5 | 40 |
| 49 | <p>Hyperfine structure of the $A^1\Sigma^+$ state of RbCs. Physical Review A, 2011, 83, .</p> | 2.5 | 41 |
| 50 | <p>Cascade coherence transfer and magneto-optical resonances at 455 nm excitation of cesium. Optics Communications, 2011, 284, 2863-2871.</p> | 2.1 | 7 |
| 51 | <p>Hyperfine structure of the $3d^34s4p^6G$ multiplet of atomic vanadium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 215001.</p> | 1.5 | 13 |
| 52 | <p>Hyperfine structure study of atomic niobium with enhanced sensitivity of Fourier transform spectroscopy. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 205001.</p> | 1.5 | 19 |
| 53 | <p>Near-dissociation photoassociative production of deeply bound NaCs molecules. Physical Review A, 2010, 82, .</p> | 2.5 | 26 |
| 54 | <p>Hyperfine structure measurements of neutral niobium with Fourier transform spectroscopy. Astronomy and Astrophysics, 2010, 516, A70.</p> | 5.1 | 18 |

| # | ARTICLE | IF | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Nonlinear magneto-optical resonances at D1 excitation of Rb. Physical Review A, 2010, 81, . b | 2.5 | 16 |
| 56 | of D1 excitation of Rb. Physical Review A, 2010, 81, . D | 2.5 | 8 |
| 57 | Spectroscopic data, spin-orbit functions, and revised analysis of strong perturbative interactions for the 7, 9, and 10D states of Cs. Physical Review A, 2007, 76, . A | 2.5 | 40 |
| 58 | Fourier-transform spectroscopy and coupled-channels deperturbation treatment of the 7, 9, and 10D states of Cs. Physical Review A, 2010, 81, . A | 2.5 | 33 |
| 59 | Analogue of oscillation theorem for nonadiabatic diatomic states: application to the $1^1\Sigma^+$ and $3^1\Sigma^+$ states of KCs. Physical Chemistry Chemical Physics, 2010, 12, 4809. | 2.8 | 13 |
| 60 | MODELLING MAGNETO-OPTICAL RESONANCES IN ATOMIC RUBIDIUM AT D1 EXCITATION IN EXTREMELY THIN CELLS WHILE MAINTAINING A SELF-CONSISTENT SET OF THEORETICAL PARAMETERS. , 2010, , . Solution of the fully-mixed-state problem: Direct deperturbation analysis of the | | 0 |
| 61 | Nonlinear magneto-optical resonances at D1 excitation of Rb. Physical Review A, 2010, 81, . A | 2.5 | 47 |
| 62 | Nonlinear magneto-optical resonances at D1 excitation of Rb for partially resolved hyperfine levels. Physical Review A, 2009, 79, . A | 2.5 | 22 |
| 63 | Spin-orbit, radial, and angular coupling effects in the NaRb excited states. , 2009, , . X | 2.5 | 40 |
| 64 | Spin-orbit, radial, and angular coupling effects in the NaRb excited states. , 2009, , . | | 0 |
| 65 | Title is missing!. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 189802-189802. | 1.5 | 1 |
| 66 | The ground electronic state of KCs studied by Fourier transform spectroscopy. Journal of Chemical Physics, 2008, 128, 244316. | 3.0 | 38 |
| 67 | Resolved magneto-optical resonances in the D1 excitation of Cs. Physical Review A, 2008, 78, . F | 2.5 | 22 |
| 68 | Coherent effects in Cs (nD) states in the presence of an external electric field. , 2007, , . | | 0 |
| 69 | Radiative lifetimes of the 7, 9, and 10D states of Cs. Physical Review A, 2007, 76, . F | 2.5 | 6 |
| 70 | Publisher's Note: Deperturbation treatment of the $1^1\Sigma^+$ complex of NaRb and prospects for ultracold molecule formation in $v=0; J=0$ [Phys. Rev. A 75, 042503 (2007)]. Physical Review A, 2007, 75, . | 2.5 | 2 |
| 71 | Level-crossing spectroscopy of the 7, 9, and 10D states of Cs in an external electric field. , 2007, , . | | 0 |
| 72 | Level-crossing spectroscopy of the 7, 9, and 10D states of Cs and validation of relativistic many-body calculations of the polarizabilities and hyperfine constants. Physical Review A, 2007, 75, . | 2.5 | 30 |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Deperturbation treatment of the $X^1\Sigma^+$ complex of NaRb and prospects for ultracold molecule formation in $X^1\Sigma^+(v=0;J=0)$. Physical Review A, 2007, 75, . | 2.5 | 102 |
| 74 | The $B^1\Sigma^+$ state of NaCs: High resolution laser induced fluorescence spectroscopy and potential construction. Journal of Chemical Physics, 2007, 127, 224302. | 3.0 | 19 |
| 76 | Optical Non-Contact Electric Field Mapping by LIF in Cs Vapor. , 2007, , . | | 0 |
| 77 | High resolution spectroscopy and potential determination of the $(3)1^1\Sigma^+$ state of NaCs. Journal of Chemical Physics, 2006, 124, 174310. | 3.0 | 23 |
| 78 | The coupling of the $X^1\Sigma^+$ and $a^3\Sigma^+$ states of the atom pair Na + Cs and modelling cold collisions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, S929-S943. | 1.5 | 58 |
| 79 | Electric field induced hyperfine level-crossings in (nD)Cs at two-step laser excitation: Experiment and theory. Optics Communications, 2006, 264, 333-341. | 2.1 | 15 |
| 80 | Radiative lifetimes of the NaRb $C(3)1^1\Sigma^+$ state: experiment and theory. European Physical Journal D, 2006, 39, 373-378. | 1.3 | 6 |
| 81 | Experimental and theoretical studies of $1^1\Sigma^+$ doublings and permanent electric dipoles in the low-lying $1^1\Sigma^+$ states of NaCs. Journal of Chemical Physics, 2006, 124, 184318. | 3.0 | 9 |
| 82 | Electric-Field-Induced Symmetry Breaking of Angular Momentum Distribution in Atoms. Physical Review Letters, 2006, 97, 043002. | 7.8 | 12 |
| 83 | Experimental study of the long range interactions between a Na (3S) and a Rb (5S) atom. , 2005, , . | | 0 |
| 84 | LIF intensity distribution as a deperturbation tool: application to the fully-mixed $a^3\Sigma^+$ complex of NaRb. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 95, 165-174. | 2.3 | 10 |
| 85 | Accurate characterisation of the $C(3)1^1\Sigma^+$ state of the NaRb molecule. European Physical Journal D, 2005, 36, 57-65. | 1.3 | 20 |
| 86 | The $D1^1\Sigma^+$ state of the NaRb molecule. European Physical Journal D, 2005, 36, 49-55. | 1.3 | 20 |
| 87 | Permanent electric dipoles and $1^1\Sigma^+$ -doubling constants in the lowest $1^1\Sigma^+$ states of RbCs. Physical Review A, 2005, 71, . | 2.5 | 29 |
| 88 | Potentials for modeling cold collisions between Na (3S) and Rb (5S) atoms. Physical Review A, 2005, 72, . | 2.5 | 72 |
| 89 | Spectroscopic studies of NaCs for the ground state asymptote of Na + Cs pairs. European Physical Journal D, 2004, 31, 205-211. | 1.3 | 36 |
| 90 | Potential of the ground state of NaRb. Physical Review A, 2004, 69, . | 2.5 | 44 |

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|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91 | Spontaneous lifetimes and relaxation cross-sections of the $D1\hat{1}$ state of NaRb. Chemical Physics Letters, 2003, 382, 593-598. | 2.6 | 5 |
| 92 | High resolution spectroscopy and channel-coupling treatment of the $A\hat{1}\hat{1}^+ + a\hat{1}\hat{1}^-$ complex of NaRb. Journal of Chemical Physics, 2002, 117, 7980-7988. | 3.0 | 45 |
| 93 | Experimental studies of the NaRb ground-state potential up to the $v=76$ level. Physical Review A, 2002, 66, . | 2.5 | 17 |
| 94 | Ab initio quasirelativistic calculations on angular momentum and magnetic couplings of molecular electronic states. Chemical Physics Letters, 2002, 356, 277-283. | 2.6 | 1 |
| 95 | Energy and radiative properties of the low-lying NaRb states. Physical Review A, 2001, 63, . | 2.5 | 31 |
| 96 | Quasirelativistic transition property calculations by the intermediate Hamiltonian method: Electronic transition dipole moments and radiative lifetimes in Te ₂ . Physical Review A, 2001, 63, . | 2.5 | 13 |
| 97 | Influence of the Stark effect on the fluorescence polarization of $X1\hat{1}^+ B1\hat{1}$ -state laser-excited NaRb: application to the direct imaging of electric fields. Journal Physics D: Applied Physics, 2001, 34, 624-630. | 2.8 | 5 |
| 98 | Strobe imaging of electric fields by depolarization of Rydberg states of Hg. Journal Physics D: Applied Physics, 2001, 34, 1933-1938. | 2.8 | 5 |
| 99 | The $c\hat{1}\hat{1}^+$, $b\hat{1}\hat{1}$, and $a\hat{1}\hat{1}^+$ states of NaK revisited. Journal of Chemical Physics, 2000, 112, 5740-5750. | 3.0 | 52 |
| 100 | The origin of $\hat{1}$ -doubling effect for the $B\hat{1}\hat{1}$ and $D\hat{1}\hat{1}$ states of NaK. Journal of Chemical Physics, 2000, 113, 8589-8593. | 3.0 | 14 |
| 101 | Permanent electric dipoles in $B\hat{1}\hat{1}^+$ and $D\hat{1}\hat{1}^+$ states of NaRb: Experiment and theory. Journal of Chemical Physics, 2000, 113, 4896. | 3.0 | 19 |
| 102 | Electric field induced alignment-orientation conversion in diatomic molecules: analysis and observation for NaK. Journal of Molecular Structure, 1999, 480-481, 283-287. | 3.6 | 2 |
| 103 | Spin-orbit coupling in the $D\hat{1}\hat{1}^+ d\hat{1}\hat{1}^-$ complex of $^{23}\text{Na}^{39}\text{K}$. Molecular Physics, 1999, 96, 955-961. | 1.7 | 12 |
| 104 | NaK $\hat{1}$ doubling and permanent electric dipoles in low-lying $\hat{1}$ states: Experiment and theory. Physical Review A, 1998, 58, 1932-1943. | 2.5 | 23 |
| 105 | Lifetimes and transition dipole moment functions of NaK low lying singlet states: Empirical and ab initio approach. Journal of Chemical Physics, 1998, 109, 6725-6735. | 3.0 | 28 |
| 106 | NaK $D1\hat{1}$ electric dipole moment measurement by Stark level crossing and $a\hat{1}\hat{1}^-$ mixing spectroscopy. Journal of Chemical Physics, 1997, 106, 2195-2204. | 3.0 | 17 |
| 107 | Line intensities in V-type polarization labelling spectroscopy of diatomic molecules. Journal of Quantitative Spectroscopy and Radiative Transfer, 1997, 58, 53-60. | 2.3 | 26 |
| 108 | Studies of rotational level $\hat{1}$ -doubling by rf-optical double resonance spectroscopy: application to NaK $D1\hat{1}$. Journal of Molecular Structure, 1997, 410-411, 55-58. | 3.6 | 0 |

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|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 109 | A missing link: What is behind de Broglie's "œperiodic phenomenon"?. Foundations of Physics Letters, 1996, 9, 575-586. | 0.6 | 10 |
| 110 | Magnetic field induced alignment"orientation conversion: Nonlinear energy shift and predissociation in Te2B1ustate. Journal of Chemical Physics, 1996, 105, 37-49. | 3.0 | 8 |
| 111 | Separation of quadratic and linear external field effects in highJquantum beats. Journal of Chemical Physics, 1994, 101, 5559-5565. | 3.0 | 6 |
| 112 | Emergence of circularity at linear polarized excitation of molecules. Journal of Chemical Physics, 1993, 99, 5742-5747. | 3.0 | 13 |
| 113 | Alignment"orientation conversion by quadratic Zeeman effect: Analysis and observation for Te2. Journal of Chemical Physics, 1993, 99, 5748-5753. | 3.0 | 13 |
| 114 | J-selective Stark orientation of molecular rotation in a beam. Physical Review Letters, 1992, 69, 3463-3466. | 7.8 | 14 |