

# Hyun-Chul Kim

## List of Publications by Year in descending order

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122  
papers

1,945  
citations

257450

24  
h-index

345221

36  
g-index

125  
all docs

125  
docs citations

125  
times ranked

1181  
citing authors

| #  | ARTICLE                                                                                                                                                                                | IF  | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1  | Transcranial focused ultrasound stimulation of human primary visual cortex. <i>Scientific Reports</i> , 2016, 6, 34026.                                                                | 3.3 | 262       |
| 2  | Smartphone-Based Psychotherapeutic Micro-Interventions to Improve Mood in a Real-World Setting. <i>Frontiers in Psychology</i> , 2016, 7, 1112.                                        | 2.1 | 58        |
| 3  | Energy-momentum tensor form factors of the nucleon in nuclear matter. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2012, 718, 625-631.    | 4.1 | 49        |
| 4  | Contribution of higher nucleon resonances to $K^*\pi$ photoproduction. <i>Physical Review D</i> , 2011, 84, .                                                                          | 4.7 | 47        |
| 5  | $\pi(1520, 3/2^-)$ -photoproduction reaction via $\pi^3 N \pi^+ K^*(1520)$ . <i>Physical Review D</i> , 2005, 71, .                                                                    | 4.7 | 45        |
| 6  | Tensor charges of the nucleon in the SU(3) chiral quark soliton model. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 387, 577-581.   | 4.1 | 43        |
| 7  | Leading-twist pion and kaon distribution amplitudes from the QCD instanton vacuum. <i>Physical Review D</i> , 2006, 74, .                                                              | 4.7 | 42        |
| 8  | Strange form factors in the context of SAMPLE, HAPPEX, and A4 experiments. <i>Physical Review D</i> , 2001, 65, .                                                                      | 4.7 | 41        |
| 9  | $\pi(1520, 3/2^-)$ -photoproduction reaction via $\pi^3 N \pi^+ K^*(1520)$ . <i>Physical Review D</i> , 2005, 71, .                                                                    | 4.1 | 41        |
| 10 | Magnetic susceptibility of the QCD vacuum. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2005, 608, 95-106.                                | 4.1 | 34        |
| 11 | Exotic and nonexotic magnetic transitions in the context of the SELEX and GRAAL experiments. <i>Physical Review D</i> , 2005, 71, .                                                    | 4.7 | 34        |
| 12 | Leading-twist pion and kaon distribution amplitudes in the gauge-invariant nonlocal chiral quark model from the instanton vacuum. <i>Physical Review D</i> , 2006, 74, .               | 4.7 | 33        |
| 13 | Axial-vector form factors of the nucleon within the chiral quark-soliton model and their strange components. <i>Physical Review D</i> , 2005, 72, .                                    | 4.7 | 32        |
| 14 | Pion mean fields and heavy baryons. <i>Physical Review D</i> , 2016, 94, .                                                                                                             | 4.7 | 32        |
| 15 | Mediation analysis of triple networks revealed functional feature of mindfulness from real-time fMRI neurofeedback. <i>NeuroImage</i> , 2019, 195, 409-432.                            | 4.2 | 32        |
| 16 | Magnetic moments of exotic pentaquarks in the chiral quark-soliton model. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2004, 585, 99-105. | 4.1 | 31        |
| 17 | $\pi$ photoproduction with coupled-channel effects. <i>Progress of Theoretical and Experimental Physics</i> , 2014, 2014, 23D03-0.                                                     | 6.6 | 31        |
| 18 | Hyperon semileptonic decay constants with flavor SU(3) symmetry breaking. <i>Physical Review C</i> , 2015, 92, .                                                                       | 2.9 | 31        |

| #  | ARTICLE                                                                                                                                                                                                                                             | IF   | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 19 | Magnetic moments of the lowest-lying singly heavy baryons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 781, 601-606.                                                                                    | 4.1  | 31        |
| 20 | Octet, decuplet, and antidecuplet magnetic moments in the chiral quark soliton model reexamined. Physical Review D, 2004, 70, .                                                                                                                     | 4.7  | 30        |
| 21 | In-medium modified energy-momentum tensor form factors of the nucleon within the framework of a<br>$\langle \bar{\psi} \gamma_\mu \psi \rangle - \langle \bar{\psi} \gamma_\mu \gamma_5 \psi \rangle$ soliton model. Physical Review D, 2014, 89, . | 4.7  | 30        |
| 22 | Electromagnetic form factors of the pion and kaon from the instanton vacuum. Physical Review D, 2008, 77, .                                                                                                                                         | 4.7  | 26        |
| 23 | Tensor charges and form factors of SU(3) baryons in the self-consistent SU(3) chiral quark-soliton model. Physical Review D, 2010, 82, .                                                                                                            | 4.7  | 26        |
| 24 | Deep neural network predicts emotional responses of the human brain from functional magnetic resonance imaging. NeuroImage, 2019, 186, 607-627.                                                                                                     | 4.2  | 25        |
| 25 | Energy-momentum tensor form factors of the nucleon within a $\chi$ soliton model. Journal of Physics G: Nuclear and Particle Physics, 2014, 41, 055107.                                                                                             | 3.6  | 24        |
| 26 | $1/N$ corrections to the magnetic susceptibility of the QCD vacuum. Physical Review D, 2007, 76, .                                                                                                                                                  | 4.7  | 23        |
| 27 | Recursive approach of EEG-segment-based principal component analysis substantially reduces cryogenic pump artifacts in simultaneous EEG-fMRI data. NeuroImage, 2015, 104, 437-451.                                                                  | 4.2  | 23        |
| 28 | Pentaquarks: Review on models and solitonic calculations of antidecuplet magnetic moments. Progress in Particle and Nuclear Physics, 2005, 55, 350-373.                                                                                             | 14.4 | 21        |
| 29 | Parity-violating asymmetries in elastic $\pi^+p$ scattering in the chiral quark-soliton model: Comparison with the A4, G0, HAPPEX and SAMPLE experiments. Physical Review D, 2006, 74, .                                                            | 4.7  | 21        |
| 30 | Twist-3 pion and kaon distribution amplitudes from the instanton vacuum with flavor SU(3) symmetry breaking. Physical Review D, 2006, 74, .                                                                                                         | 4.7  | 21        |
| 31 | The electric dipole moment of the nucleons in holographic QCD. Journal of High Energy Physics, 2007, 2007, 036-036.                                                                                                                                 | 4.7  | 20        |
| 32 | Spin structure of the pion from the instanton vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 700, 305-312.                                                                                         | 4.1  | 19        |
| 33 | Heavy pentaquark states P(4380) and P(4450) in the $J/\psi$ production induced by pion beams off the nucleon. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 763, 358-364.                                 | 4.1  | 19        |
| 34 | A test of the instanton vacuum with low-energy theorems of the axial anomaly. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 572, 181-188.                                                                 | 4.1  | 18        |
| 35 | Meson-loop contributions to the quark condensate from the instanton vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 633, 701-709.                                                                   | 4.1  | 18        |
| 36 | QCD condensates with flavor SU(3) symmetry breaking from the instanton vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 647, 145-151.                                                                | 4.1  | 18        |



| #  | ARTICLE                                                                                                                                                                                         | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Production of hidden-charm strange pentaquarks from the $K^0_S$ photoproduction off the neutron with nucleon resonances. Physical Review D, 2007, 75, .                                         | 4.7 | 13        |
| 56 | Kaon semileptonic decay (Kl3) form factors from the instanton vacuum. Physical Review D, 2007, 75, .                                                                                            | 4.7 | 12        |
| 57 | Vector transition form factors of the $\rho$ and $\omega$ in the chiral quark-soliton model. Nuclear Physics A, 2008, 811, 353-377.                                                             | 1.5 | 12        |
| 58 | Axial-vector transitions and strong decays of the baryon antidecuplet in the self-consistent SU(3) chiral quark-soliton model. Physical Review D, 2008, 78, .                                   | 4.7 | 12        |
| 59 | Overview of the KoRIA Facility for Rare Isotope Beams. Few-Body Systems, 2013, 54, 197-204.                                                                                                     | 1.5 | 12        |
| 60 | Electromagnetic transitions of the singly charmed baryons with spin $\frac{1}{2}$ . Physical Review D, 2021, 103, .                                                                             | 4.7 | 12        |
| 61 | In-medium modified $\bar{\psi}\psi$ mesonic Lagrangian and properties of nuclear matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 723, 442-447.  | 4.1 | 11        |
| 62 | Energy-momentum tensor of the nucleon on the light front: Abel tomography case. Physical Review D, 2021, 104, .                                                                                 | 4.7 | 11        |
| 63 | $\rho$ production of the $K^0_S$ photoproduction off the neutron with nucleon resonances. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 786, 156-164. | 4.1 | 10        |
| 64 | Pion weak decay constant at finite density from the instanton vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 666, 324-331.                     | 4.1 | 10        |
| 65 | Modification of generalized vector form factors and transverse charge densities of the nucleon in nuclear matter. Physical Review D, 2016, 93, .                                                | 4.7 | 10        |
| 66 | $K^0_S$ photoproduction off the neutron with nucleon resonances. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 786, 156-164.                          | 4.1 | 10        |
| 67 | Axial-vector form factors of the baryon decuplet with flavor SU(3) symmetry breaking. Physical Review D, 2020, 102, .                                                                           | 4.7 | 10        |
| 68 | Mesons and nucleons from holographic QCD in a unified approach. Journal of High Energy Physics, 2009, 2009, 034-034.                                                                            | 4.7 | 9         |
| 69 | Transverse charge distributions of the nucleon and their Abel images. Physical Review D, 2021, 104, .                                                                                           | 4.7 | 9         |
| 70 | Effective chiral Lagrangian in the chiral limit from the instanton vacuum. Physical Review D, 2004, 69, .                                                                                       | 4.7 | 8         |
| 71 | Generalized form factors and spin structures of the kaon. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 707, 546-552.                                 | 4.1 | 8         |
| 72 | Production of hidden-charm strange pentaquarks from the $K^0_S$ photoproduction off the neutron with nucleon resonances. Physical Review D, 2007, 75, .                                         | 4.7 | 8         |

| #  | ARTICLE                                                                                                                                                                                                                                                          | IF  | CITATIONS |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | 3D convolutional neural network for feature extraction and classification of fMRI volumes. , 2018, , .                                                                                                                                                           |     | 8         |
| 74 | ??(1405,1/2?) Photoproduction from the ??p $\hat{\Lambda}_i$ ? K+??(1405) Reaction. Journal of the Korean Physical Society, 2011, 59, 2676-2683.                                                                                                                 | 0.7 | 8         |
| 75 | $\hat{\Gamma}^S=1,2$ effective weak chiral Lagrangian from the instanton vacuum. Nuclear Physics A, 2002, 699, 541-561.                                                                                                                                          | 1.5 | 7         |
| 76 | Quark-gluon mixed condensate of the QCD vacuum in holographic QCD. Journal of High Energy Physics, 2008, 2008, 011-011.                                                                                                                                          | 4.7 | 6         |
| 77 | Hybrid exotic meson with $\langle i \rangle J \langle /i \rangle \langle \sup \rangle PC \langle /sup \rangle = 1 \langle \sup \rangle \hat{a}'' \langle /sup \rangle$ in AdS/QCD. Journal of High Energy Physics, 2009, 2009, 034-034.                          | 4.7 | 6         |
| 78 | Parity-violating $\hat{\Gamma}^S$ NN coupling constant in the chiral quark $\hat{a}''$ soliton model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 713, 439-446.                                                      | 4.1 | 6         |
| 79 | Test $\hat{a}''$ retest reliability of spatial patterns from resting-state functional MRI using the restricted Boltzmann machine and hierarchically organized spatial patterns from the deep belief network. Journal of Neuroscience Methods, 2020, 330, 108451. | 2.5 | 6         |
| 80 | Mixed $\hat{a}''$ effects multilevel analysis followed by canonical correlation analysis is an effective $\langle \sup \rangle fMRI \langle /sup \rangle$ tool for the investigation of idiosyncrasies. Human Brain Mapping, 2021, 42, 5374-5396.                | 3.6 | 6         |
| 81 | Production of the pentaquark $\hat{\Gamma}^+$ in np scattering. Physical Review D, 2004, 70, .                                                                                                                                                                   | 4.7 | 5         |
| 82 | Transverse strange quark spin structure of the nucleon. Physical Review D, 2012, 85, .                                                                                                                                                                           | 4.7 | 5         |
| 83 | Mass splittings of the baryon decuplet and antidecuplet with second-order flavor symmetry breakings within a chiral soliton model. Journal of the Korean Physical Society, 2012, 61, 1956-1964.                                                                  | 0.7 | 5         |
| 84 | Production and decay of charmed baryons. Nuclear Physics A, 2016, 954, 341-351.                                                                                                                                                                                  | 1.5 | 5         |
| 85 | Magnetic Susceptibility of the QCD Vacuum at a Finite Quark-chemical Potential. Journal of the Korean Physical Society, 2009, 55, 429-434.                                                                                                                       | 0.7 | 5         |
| 86 | $\hat{\Gamma}^S = 0$ effective weak chiral Lagrangian from the instanton vacuum. European Physical Journal C, 2006, 45, 451-457.                                                                                                                                 | 3.9 | 4         |
| 87 | Transverse charge densities in the nucleon in nuclear matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 726, 375-381.                                                                                              | 4.1 | 4         |
| 88 | Baryonic matter and the medium modification of the baryon masses. Physical Review C, 2021, 103, .                                                                                                                                                                | 2.9 | 4         |
| 89 | Axial-vector transition form factors of the baryon octet to the baryon decuplet with flavor SU(3) symmetry breaking. Physical Review D, 2022, 105, .                                                                                                             | 4.7 | 4         |
| 90 | Weak $\hat{a}''$ $\hat{\Gamma}^S$ generalized form factors and transverse transition quark-spin density from the instanton vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 747, 460-467.                         | 4.1 | 3         |

| #   | ARTICLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | IF  | CITATIONS |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91  | Vector and Axial-vector form factors in radiative kaon decay and flavor SU(3) symmetry breaking. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 795, 438-445.                                                                                                                                                                                                                                                                                         | 4.1 | 3         |
| 92  | $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \tilde{f} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ and $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \tilde{\kappa} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ coupling constants for the charmed and beauty mesons. Physical Review D, 2020, 102, . | 4.7 | 3         |
| 93  | Strangeness-conserving effective weak chiral Lagrangian. European Physical Journal A, 2005, 24, 105-105.                                                                                                                                                                                                                                                                                                                                                                                       | 2.5 | 2         |
| 94  | Pentaquark $\hat{\Lambda}^+$ production via $\hat{\Lambda}^3 N \hat{\Lambda}^+ K \hat{\Lambda}^+ \hat{\Lambda}^+ (3/2 \hat{\Lambda}^\pm)$ . Physical Review C, 2006, 74, .                                                                                                                                                                                                                                                                                                                     | 2.9 | 2         |
| 95  | Properties of the bound nucleons. EPJ Web of Conferences, 2012, 20, 04005.                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.3 | 2         |
| 96  | $\hat{\Lambda}^+$ baryon, $N^*$ (1685) resonance, and $\tilde{f} \in N$ sigma term reexamined within the framework of a chiral soliton model. Progress of Theoretical and Experimental Physics, 2013, 2013, .                                                                                                                                                                                                                                                                                  | 6.6 | 2         |
| 97  | Pion radiative weak decay from the instanton vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 772, 687-693.                                                                                                                                                                                                                                                                                                                                     | 4.1 | 2         |
| 98  | Focused ultrasound enhances the anesthetic effects of topical lidocaine in rats. BMC Anesthesiology, 2021, 21, 158.                                                                                                                                                                                                                                                                                                                                                                            | 1.8 | 2         |
| 99  | Photoproduction of $\hat{\Lambda}^+(1540, 1/2^+)$ reexamined with new theoretical information. Physical Review D, 2009, 79, .                                                                                                                                                                                                                                                                                                                                                                  | 4.7 | 1         |
| 100 | Hadrons from a hard wall AdS/QCD model. Chinese Physics C, 2010, 34, 1520-1522.                                                                                                                                                                                                                                                                                                                                                                                                                | 3.7 | 1         |
| 101 | A phenomenological description of an incoherent Fermi liquid near optimal doping in high $T_c$ cuprates. Journal of Physics Condensed Matter, 2011, 23, 495701.                                                                                                                                                                                                                                                                                                                                | 1.8 | 1         |
| 102 | $\hat{\Lambda} K[\text{sup } \hat{\Lambda}^-] \hat{\Lambda} (1116)$ photoproduction and nucleon resonances. , 2011, , .                                                                                                                                                                                                                                                                                                                                                                        |     | 1         |
| 103 | Vector and Tensor Coupling Constants of SU(3) Baryons in a Chiral Soliton Model. Few-Body Systems, 2013, 54, 325-328.                                                                                                                                                                                                                                                                                                                                                                          | 1.5 | 1         |
| 104 | Evaluation of weight sparsity control during autoencoder training of resting-state fMRI using non-zero ratio and hoyer's sparseness. , 2016, , .                                                                                                                                                                                                                                                                                                                                               |     | 1         |
| 105 | Evaluation of weight sparsity regularization schemes of deep neural networks applied to functional neuroimaging data. , 2017, , .                                                                                                                                                                                                                                                                                                                                                              |     | 1         |
| 106 | Nucleon Properties in Nuclear Matter. , 2011, , .                                                                                                                                                                                                                                                                                                                                                                                                                                              |     | 0         |
| 107 | The mass splittings of SU(3) baryons within a chiral soliton model. , 2011, , .                                                                                                                                                                                                                                                                                                                                                                                                                |     | 0         |
| 108 | Tensor properties of the nucleon. , 2011, , .                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     | 0         |

| #   | ARTICLE                                                                                                                                                            | IF  | CITATIONS |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 109 | Spin structures of the pion and nucleon. EPJ Web of Conferences, 2012, 20, 01008.                                                                                  | 0.3 | 0         |
| 110 | A Modified Pion-Rho-Omega Mesonic Lagrangian in Nuclear Matter. Few-Body Systems, 2013, 54, 1067-1070.                                                             | 1.5 | 0         |
| 111 | Energy-Momentum Tensor Form Factors of the Nucleon in Nuclear Matter in the Chiral Soliton Model. Few-Body Systems, 2013, 54, 1083-1086.                           | 1.5 | 0         |
| 112 | Contribution of $N^*$ and $\hat{1}^*$ Resonances in ${}^{K^*}\Sigma$ (1190) Photoproduction. Few-Body Systems, 2013, 54, 1499-1502.                                | 1.5 | 0         |
| 113 | $K^*\hat{1}(1116)$ Photoproduction and Nucleon Resonances. Few-Body Systems, 2013, 54, 307-310.                                                                    | 1.5 | 0         |
| 114 | Tensor Form Factors and Transverse Spin Structures of the Nucleon. Few-Body Systems, 2013, 54, 317-320.                                                            | 1.5 | 0         |
| 115 | Pion-Rho Meson Lagrangian in Nuclear Matter. Few-Body Systems, 2013, 54, 465-468.                                                                                  | 1.5 | 0         |
| 116 | Nuclear Matter Properties from a Chiral Soliton Model. Few-Body Systems, 2013, 54, 517-520.                                                                        | 1.5 | 0         |
| 117 | Desynchronization of the mu oscillatory activity during motor imagery: A preliminary EEG-fMRI study. , 2015, , .                                                   |     | 0         |
| 118 | BARYON ANTIDECUplet IN THE CHIRAL QUARK-SOLITON MODEL. , 2010, , .                                                                                                 |     | 0         |
| 119 | $\hat{1}$ -PHOTOPRODUCTION NEAR THE THRETHOLD WITHIN AN EFFECTIVE LAGRANGIAN APPROACH. , 2010, , .                                                                 |     | 0         |
| 120 | MESONS AND NUCLEONS FROM HOLOGRAPHIC QCD. , 2010, , .                                                                                                              |     | 0         |
| 121 | Pion Electromagnetic Form Factor and $\omega$ -meson Mass Shift at Finite Density. Journal of the Korean Physical Society, 2011, 59, 217-223.                      | 0.7 | 0         |
| 122 | Electronic Cigarette Vaping Did Not Enhance the Neural Process of Working Memory for Regular Cigarette Smokers. Frontiers in Human Neuroscience, 2022, 16, 817538. | 2.0 | 0         |