

# Xiao-Feng Shi

## List of Publications by Year in descending order

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Version: 2024-02-01

25  
papers

481  
citations

687335

13  
h-index

677123

22  
g-index

25  
all docs

25  
docs citations

25  
times ranked

360  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Quantum emulation of a spin system with topologically protected ground states using superconducting quantum circuits. <i>Physical Review B</i> , 2010, 81, .                        | 3.2 | 80        |
| 2  | Deutsch, Toffoli, and cnot Gates via Rydberg Blockade of Neutral Atoms. <i>Physical Review Applied</i> , 2018, 9, .   | 3.8 | 55        |
| 3  | Rydberg Quantum Gates Free from Blockade Error. <i>Physical Review Applied</i> , 2017, 7, .   | 3.8 | 39        |
| 4  | Quantum logic and entanglement by neutral Rydberg atoms: methods and fidelity. <i>Quantum Science and Technology</i> , 2022, 7, 023002.   | 5.8 | 30        |
| 5  | Fast, Accurate, and Realizable Two-Qubit Entangling Gates by Quantum Interference in Detuned Rabi Cycles of Rydberg Atoms. <i>Physical Review Applied</i> , 2019, 11, .             | 3.8 | 29        |
| 6  | Suppressing Motional Dephasing of Ground-Rydberg Transition for High-Fidelity Quantum Control with Neutral Atoms. <i>Physical Review Applied</i> , 2020, 13, .                      | 3.8 | 27        |
| 7  | Accurate Quantum Logic Gates by Spin Echo in Rydberg Atoms. <i>Physical Review Applied</i> , 2018, 10, .  | 3.8 | 24        |
| 8  | Entanglement of neutral-atom chains by spin-exchange Rydberg interaction. <i>Physical Review A</i> , 2014, 90, .  | 2.5 | 23        |
| 9  | Annulled van der Waals interaction and fast Rydberg quantum gates. <i>Physical Review A</i> , 2017, 95, .   | 2.5 | 23        |
| 10 | Topological quantum phase transition in the extended Kitaev spin model. <i>Physical Review B</i> , 2009, 79, .  | 3.2 | 22        |
| 11 | Influence of electric field on the amyloid- $\beta$ (29-42) peptides embedded in a membrane bilayer. <i>Journal of Chemical Physics</i> , 2018, 148, 045105.                        | 3.0 | 21        |
| 12 | Small static electric field strength promotes aggregation-prone structures in amyloid- $\beta$ (29-42). <i>Journal of Chemical Physics</i> , 2017, 146, 145101.                     | 3.0 | 17        |
| 13 | Amyloid- $\beta$ (29-42) Dimeric Conformations in Membranes Rich in Omega-3 and Omega-6 Polyunsaturated Fatty Acids. <i>Journal of Physical Chemistry B</i> , 2019, 123, 2687-2696. | 2.6 | 14        |
| 14 | Transition Slow-Down by Rydberg Interaction of Neutral Atoms and a Fast Controlled-not Quantum Gate. <i>Physical Review Applied</i> , 2020, 14, .                                   | 3.8 | 14        |
| 15 | Rydberg quantum computation with nuclear spins in two-electron neutral atoms. <i>Frontiers of Physics</i> , 2021, 16, 1.  | 5.0 | 11        |
| 16 | Exotic phase diagram of a topological quantum system. <i>Physical Review B</i> , 2010, 82, .  | 3.2 | 9         |
| 17 | Single-site Rydberg addressing in 3D atomic arrays for quantum computing with neutral atoms. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 054002. | 1.5 | 9         |
| 18 | Simulating magnetic fields in Rydberg-dressed neutral atoms. <i>Physical Review A</i> , 2018, 97, .   | 2.5 | 8         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Universal Barenco quantum gates via a tunable noncollinear interaction. <i>Physical Review A</i> , 2018, 97, .  | 2.5 | 7         |
| 20 | Nuclear spin polarization in a single quantum dot pumped by two laser beams. <i>Physical Review B</i> , 2013, 87, .   | 3.2 | 6         |
| 21 | Quantum gates with weak van der Waals interactions of neutral Rydberg atoms. <i>Physical Review A</i> , 2021, 104, .  | 2.5 | 5         |
| 22 | Hyperentanglement of divalent neutral atoms by Rydberg blockade. <i>Physical Review A</i> , 2021, 104, .  | 2.5 | 4         |
| 23 | Spin-charge separation of dark-state polaritons in a Rydberg medium. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 074005. | 1.5 | 3         |
| 24 | Rydberg Wire Gates for Universal Quantum Computation. <i>Frontiers in Physics</i> , 0, 10, .  | 2.1 | 1         |
| 25 | Fast atom-photon entangling gates with a superconducting coplanar waveguide. <i>Physical Review A</i> , 2022, 105, .  | 2.5 | 0         |