

# Benjamin Kay

## List of Publications by Year in descending order

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Version: 2024-02-01

96  
papers

2,165  
citations

218381

26  
h-index

243296

44  
g-index

96  
all docs

96  
docs citations

96  
times ranked

1517  
citing authors

| #  | ARTICLE                                                                                                                                                                                       | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1  | Structure Relevant to Neutrinoless Double $\beta$ Decay. Physical Review Letters, 2016, 116, 112305.                                                                                          | 2.9 | 131       |
| 2  | Direct Evidence of Octupole Deformation in Neutron-Rich $^{144}\text{Ba}$ . Physical Review Letters, 2016, 116, 112305.                                                                       | 2.9 | 118       |
| 3  | Collectivity at $^{144}\text{Ba}$ and the Origin of Large Reaction rate for carbon burning in massive stars. Physical Review C, 2010, 81, .                                                   | 1.1 | 108       |
| 4  | Neutron-Rich $^{144}\text{Ba}$ and the Origin of Large Reaction rate for carbon burning in massive stars. Physical Review C, 2010, 81, .                                                      | 1.1 | 107       |
| 5  | Cross-shell excitation in two-proton knockout: Structure of $^{52}\text{Ca}$ . Physical Review C, 2006, 74, .                                                                                 | 1.1 | 104       |
| 6  | Storage ring at HIE-ISOLDE. European Physical Journal: Special Topics, 2012, 207, 1-117.                                                                                                      | 1.2 | 101       |
| 7  | Evidence for rigid triaxial deformation at low energy in $^{146}\text{Ba}$ . Physical Review C, 2013, 87, .                                                                                   | 1.1 | 82        |
| 8  | Direct Evidence for Octupole Deformation in $^{146}\text{Ba}$ and the Origin of Large Reaction rate for carbon burning in massive stars. Physical Review C, 2013, 87, .                       | 2.9 | 80        |
| 9  | Reaction rate for carbon burning in massive stars. Physical Review C, 2018, 97, .                                                                                                             | 1.1 | 69        |
| 10 | Quenching of Cross Sections in Nucleon Transfer Reactions. Physical Review Letters, 2013, 111, 042502.                                                                                        | 2.9 | 64        |
| 11 | Commissioning of the HELIOS spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 622, 97-106. | 0.7 | 58        |
| 12 | Shape coexistence and the role of axial asymmetry in $^{72}\text{Ge}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 754, 254-259.                 | 1.5 | 57        |
| 13 | Test of Sum Rules in Nucleon Transfer Reactions. Physical Review Letters, 2012, 108, 022501.                                                                                                  | 2.9 | 55        |
| 14 | Valence nucleon populations in the Ni isotopes. Physical Review C, 2013, 87, .                                                                                                                | 1.1 | 51        |
| 15 | High-j single-particle neutron states outside the core. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 658, 216-221.                                 | 1.5 | 40        |
| 16 | Valence neutron properties relevant to the neutrinoless double $\beta$ decay of $^{130}\text{Te}$ . Physical Review C, 2010, 82, .                                                            | 1.1 | 43        |
| 17 | High-j single-particle neutron states outside the core. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 658, 216-221.                                 | 1.5 | 40        |
| 18 | Valence neutron properties relevant to the neutrinoless double $\beta$ decay of $^{130}\text{Te}$ . Physical Review C, 2013, 87, .                                                            | 1.1 | 37        |

| #  | ARTICLE                                                                                                                                                                                 | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | First Experiment with HELIOS: The Structure of $B$ . Physical Review Letters, 2010, 104, 132501.                                                                                        | 2.9 | 36        |
| 20 | Neutron s states in loosely bound nuclei. Physical Review C, 2014, 89, .                                                                                                                | 1.1 | 35        |
| 21 | Pair correlations in nuclei involved in neutrinoless double $\hat{I}^2$ decay: Ge76 and Se76. Physical Review C, 2007, 75, .                                                            | 1.1 | 34        |
| 22 | Fission Barrier of Superheavy Nuclei and Persistence of Shell Effects at High Spin: Cases of $No$ and $254$ . Physical Review C, 2013, 87, .                                            | 2.9 | 34        |
| 23 | Neutron single-particle strength outside the $N=50$ core. Physical Review C, 2013, 87, .                                                                                                | 1.1 | 32        |
| 24 | Single-neutron energies outside $^{136}Xe$ . Physical Review C, 2011, 84, .                                                                                                             | 1.1 | 28        |
| 25 | Sub-shell closure and shape coexistence in the transitional nucleus $Zr$ . Physical Review C, 2018, 98, .                                                                               |     | 28        |
| 26 | Core-coupled protons, $f_{7/2}$ intruder states, and competing $g_{9/2}$ proton and neutron structures in $^{65,67}Cu$ . Physical Review C, 2012, 85, .                                 | 1.1 | 26        |
| 27 | Change of nuclear configurations in the neutrinoless double- $\hat{I}^2$ decay of $^{130}Te$ , $^{130}Xe$ , and $^{136}Ba$ . Physical Review C, 2016, 93, .                             | 1.1 | 26        |
| 28 | Identification of the $g$ bands in the neutron-rich $Ga$ . Physical Review C, 2016, 94, .                                                                                               | 1.1 | 24        |
| 29 | Rearrangement of valence neutrons in the neutrinoless double- $\hat{I}^2$ decay of $^{73}As$ . Physical Review C, 2016, 94, .                                                           | 1.1 | 23        |
| 30 | Cross-shell excitations near the $\hat{I}^2$ structure of $Mg$ . Physical Review C, 2010, 82, .                                                                                         | 1.1 | 22        |
| 31 | Collectivity, and $B$ in $^{72}Ni$ . Physical Review C, 2010, 82, .                                                                                                                     | 1.1 | 22        |
| 32 | Experimental study of the rearrangements of valence protons and neutrons amongst single-particle orbits during double- $\hat{I}^2$ decay in $^{100}Mo$ . Physical Review C, 2017, 96, . | 1.1 | 21        |
| 33 | Experimental study of the $O$ in $^{19}O$ . Physical Review C, 2017, 96, .                                                                                                              | 1.1 | 19        |
| 34 | Study of $p$ in $^{19}O$ . Physical Review C, 2017, 96, .                                                                                                                               | 1.1 | 19        |
| 35 | Study of $p$ in $^{19}O$ . Physical Review C, 2017, 96, .                                                                                                                               |     |           |

| #  | ARTICLE                                                                                                                                                                                                           | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Pair correlations in the neutrinoless double- $\hat{I}^2$ decay candidate $Te130$ . <i>Physical Review C</i> , 2010, 82, .                                                                                        | 1.1 | 18        |
| 38 | Neutron pair correlations in $A < 100$ nuclei involved in neutrinoless double- $\hat{I}^2$ decay. <i>Physical Review C</i> , 2012, 86, .                                                                          | 1.1 | 18        |
| 39 | First Exploration of Neutron Shell Structure below Lead and beyond $N < 126$ . <i>Physical Review Letters</i> , 2020, 124, 062502.                                                                                | 2.9 | 18        |
| 40 | One-particle excitations outside the $54Ti$ semi-magic core: The $55V$ and $55Ti$ yrast structures. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2007, 650, 135-140. | 1.5 | 17        |
| 41 | Yrast structure of $Na > 23$ and $Mg > 26$ and $Bi$ isomeric states and one-proton-particle, three-neutron-hole excitations. <i>Physical Review C</i> , 2012, 86, .                                               | 1.1 | 15        |
| 42 | Sequence in $Ge > 78$ .                                                                                                                                                                                           | 2.9 | 15        |
| 43 | Cross-shell excitations in $30Al$ and $30Si$ at high spin. <i>Nuclear Physics A</i> , 2010, 847, 149-167.                                                                                                         | 0.6 | 14        |
| 44 | One-neutron knockout in the vicinity of the $N=32$ sub-shell closure: $Be9(Cr57, Cr56 + \hat{I}^3)X$ . <i>Physical Review C</i> , 2006, 74, .                                                                     | 1.1 | 13        |
| 45 | High-lying, non-yrast shell structure in $Ti < 52$ . <i>Physical Review C</i> , 2009, 80, .                                                                                                                       | 1.1 | 13        |
| 46 | Proton pair correlations and the neutrinoless double- $\hat{I}^2$ decay of $76Ge$ . <i>Physical Review C</i> , 2013, 87, .                                                                                        | 1.1 | 13        |
| 47 | Ordering of the $0 < 1 < 2$ levels in light nuclei. <i>Physical Review C</i> , 2016, 94, .                                                                                                                        | 1.1 | 13        |
| 48 | Effect of Weak Binding on the Apparent Spin-Orbit Splitting in Nuclei. <i>Physical Review Letters</i> , 2017, 119, 182502.                                                                                        | 2.9 | 12        |
| 49 | Spectroscopy of the odd-odd $f_7/2$ -shell nucleus $Sc52$ from secondary fragmentation. <i>Physical Review C</i> , 2006, 73, .                                                                                    | 1.1 | 11        |
| 50 | $\hat{I}^3$ -ray spectroscopy of the odd-odd $N=Z+2$ deformed proton emitter $112Cs$ . <i>Physical Review C</i> , 2012, 85, .                                                                                     | 1.1 | 11        |
| 51 | Probing the Single-Particle Character of Rotational States in $F > 19$ . Using a Short-Lived Isomeric Beam. <i>Physical Review Letters</i> , 2018, 120, 122503.                                                   | 2.9 | 11        |
| 52 | Single-particle and collective structures in $Cr55$ and $V55$ . <i>Physical Review C</i> , 2011, 83, .                                                                                                            | 1.1 | 10        |
| 53 | Population of positive-parity states in $Sc > 53$ through one-proton knockout. <i>Physical Review C</i> , 2010, 81, .                                                                                             | 1.1 | 9         |

| #  | ARTICLE                                                                                                  | IF  | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Single-neutron excitations in $^{18}\text{N}$ . Physical Review C, 2013, 88.                             | 1.1 | 8         |
| 56 | Experimental study of the low-lying negative-parity states in $^{11}\text{Be}$ using the $^{11}\text{B}$ |     |           |

| #  | ARTICLE                                                                                                                                                                       | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Exploring the stability of super heavy elements: First Measurement of the Fission Barrier of $^{254}\text{No}$ . EPJ Web of Conferences, 2014, 66, 02046.                     | 0.1 | 2         |
| 74 | Study of the $^{20,22}\text{Ne}+^{20,22}\text{Ne}$ and $^{10,12,13,14,15}\text{C}+^{12}\text{C}$ Fusion Reactions with MUSIC. EPJ Web of Conferences, 2016, 117, 08009.       | 0.1 | 2         |
| 75 | How well do we understand the reaction rate of C burning?. EPJ Web of Conferences, 2017, 163, 00011.                                                                          | 0.1 | 2         |
| 76 | First direct measurement of the $^{13}\text{C}(\alpha, n)^{16}\text{O}$ reaction relevant for core-c                                                                          |     |           |
| 77 | Neutron-hole strength in the $Z=81$ isotones. Journal of Physics: Conference Series, 2012, 381, 012098.                                                                       | 0.3 | 1         |
| 78 | Investigating trends in proton single-particle states in $Z=51$ isotopes using transfer reactions. Journal of Physics: Conference Series, 2012, 381, 012099.                  | 0.3 | 1         |
| 79 | HELIOS - progress and possibilities. Journal of Physics: Conference Series, 2012, 381, 012095.                                                                                | 0.3 | 1         |
| 80 | Constraining neutrinoless double $\beta$ decay matrix elements in $^{130}\text{Te}$ . Journal of Physics: Conference Series, 2012, 381, 012043.                               | 0.3 | 1         |
| 81 | Nuclear structure relevant to neutrinoless double beta decay candidate $^{130}\text{Te}$ and other recent results. , 2013, , .                                                |     | 1         |
| 82 | Nuclear Structure of Light Nuclei Near Threshold. Nuclear Physics News, 2014, 24, 16-21.                                                                                      | 0.1 | 1         |
| 83 | High- $J$ neutron excitations outside $^{13}\text{C}$ . Nuclear correlations and the structure of $^{13}\text{C}$ . Physical Review C, 2017, 96, .                            | 1.1 | 1         |
| 84 | Nucleon correlations and the structure of $^{41}\text{Zn}$ . Physical Review C, 2017, 96, .                                                                                   | 1.5 | 1         |
| 85 | Cross section measurements in the $^{12}\text{C}+^{12}\text{C}$ system. EPJ Web of Conferences, 2017, 165, 01015.                                                             | 0.1 | 1         |
| 86 | An overview of nucleon-transfer studies on $0^+_{1/2}$ -decay candidates $^{76}\text{Ge}$ , $^{130}\text{Te}$ , and $^{136}\text{Xe}$ . AIP Conference Proceedings, 2017, , . | 0.3 | 1         |
| 87 | Study of $\hat{1}\pm$ -particle induced reactions using the MUSIC detector. AIP Conference Proceedings, 2018, , .                                                             | 0.3 | 1         |
| 88 | Neutron-hole strength in $N=81$ nuclei. Physical Review C, 2020, 101, .                                                                                                       | 1.1 | 1         |
| 89 | Single-nucleon energies changing with nucleon number. Physical Review C, 2022, 105, .                                                                                         | 1.1 | 1         |
| 90 | Experimental study of the isomeric state in $^{16}\text{C}$ using the $^{16}\text{C}(\alpha, n)^{19}\text{F}$ reaction.                                                       | 1.1 | 1         |

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|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91 | Study of valence neutrons in $^{136}\text{Xe}$ with HELIOS. Journal of Physics: Conference Series, 2011, 312, 092034.                                           | 0.3 | 0         |
| 92 | Trends in the $g_{7/2}$ and $h_{11/2}$ neutron single-particle energies in $N = 51$ isotones. Journal of Physics: Conference Series, 2012, 381, 012100.         | 0.3 | 0         |
| 93 | Transfer Reactions and the Structure of Neutron-rich Nuclei. Acta Physica Polonica B, 2013, 44, 349.                                                            | 0.3 | 0         |
| 94 | The $^{20}\text{Ne}(d,p)^{21}\text{Ne}$ transfer reaction in relation to the $s$ -process abundances. Journal of Physics: Conference Series, 2016, 665, 012026. | 0.3 | 0         |
| 95 | Coriolis coupling effects in proton-pickup spectroscopic factors from B12. Physical Review C, 2021, 103, .                                                      | 1.1 | 0         |
| 96 | Search for the $1/2^+$ intruder state in P35. Physical Review C, 2020, 102, .                                                                                   | 1.1 | 0         |