Paolo Pani

List of Publications by Year
in descending order

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Version: 2024-02-01

170 papers	13,228 citations	19657 61 h-index	22832 112 g-index
177 all docs	177 docs citations	177 times ranked	4166 citing authors

#	Article	IF	Citations
1	Testing general relativity with present and future astrophysical observations. Classical and Quantum Gravity, 2015, 32, 243001.	4.0	943
2	Is the Gravitational-Wave Ringdown a Probe of the Event Horizon?. Physical Review Letters, 2016, 116, 171101.	7.8	495
3	Testing the nature of dark compact objects: a status report. Living Reviews in Relativity, 2019, 22, 1.	26.7	494
4	Superradiance. Lecture Notes in Physics, 2015, , .	0.7	451
5	Black holes, gravitational waves and fundamental physics: a roadmap. Classical and Quantum Gravity, 2019, 36, 143001.	4.0	451
6	Gravitational-wave signatures of exotic compact objects and of quantum corrections at the horizon scale. Physical Review D, 2016, 94, .	4.7	347
7	Can environmental effects spoil precision gravitational-wave astrophysics?. Physical Review D, 2014, 89, .	4.7	321
8	Tests for the existence of black holes through gravitational wave echoes. Nature Astronomy, 2017, 1, 586-591.	10.1	274
9	Massive spin-2 fields on black hole spacetimes: Instability of the Schwarzschild and Kerr solutions and bounds on the graviton mass. Physical Review D, 2013, 88, .	4.7	201
10	Are black holes in alternative theories serious astrophysical candidates? The case for Einstein-dilaton-Gauss-Bonnet black holes. Physical Review D, 2009, 79, .	4.7	198
11	Light rings as observational evidence for event horizons: Long-lived modes, ergoregions and nonlinear instabilities of ultracompact objects. Physical Review D, 2014, 90, .	4.7	198
12	Prospects for fundamental physics with LISA. General Relativity and Gravitation, 2020, 52, 1.	2.0	198
13	Black-Hole Bombs and Photon-Mass Bounds. Physical Review Letters, 2012, 109, 131102.	7.8	190
14	Gravitational wave searches for ultralight bosons with LIGO and LISA. Physical Review D, 2017, 96, .	4.7	190
15	Black holes as particle detectors: evolution of superradiant instabilities. Classical and Quantum Gravity, 2015, 32, 134001.	4.0	183
16	Testing strong-field gravity with tidal Love numbers. Physical Review D, 2017, 95, .	4.7	175
17	Compact Stars in Eddington Inspired Gravity. Physical Review Letters, 2011, 107, 031101.	7.8	164
18	Perturbations of slowly rotating black holes: Massive vector fields in the Kerr metric. Physical Review D, 2012, 86, .	4.7	157

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19	Constraining the mass of dark photons and axion-like particles through black-hole superradiance. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 043-043.	5.4	156
20	Slowly rotating black holes in alternative theories of gravity. Physical Review D, 2011, 84, .	4.7	152
21	Perturbed black holes in Einstein-dilaton-Gauss-Bonnet gravity: Stability, ringdown, and gravitational-wave emission. Physical Review D, 2016, 94, .	4.7	152
22	Stochastic and Resolvable Gravitational Waves from Ultralight Bosons. Physical Review Letters, 2017, 119, 131101.	7.8	151
23	Ergoregion instability of ultracompact astrophysical objects. Physical Review D, 2008, 77, .	4.7	144
24	INTO THE LAIR: GRAVITATIONAL-WAVE SIGNATURES OF DARK MATTER. Astrophysical Journal, 2013, 774, 48.	4.5	135
25	Gravitational signature of Schwarzschild black holes in dynamical Chern-Simons gravity. Physical Review D, 2010, 81, .	4.7	133
26	Compact stars in alternative theories of gravity: Einstein-Dilaton-Gauss-Bonnet gravity. Physical Review D, 2011, 84, .	4.7	133
27	Equation-of-state-independent relations in neutron stars. Physical Review D, 2013, 88, .	4.7	133
28	Black holes and binary mergers in scalar Gauss-Bonnet gravity: Scalar field dynamics. Physical Review D, 2019, 99, .	4.7	131
29	Gravitational wave signatures of the absence of an event horizon: Nonradial oscillations of a thin-shell gravastar. Physical Review D, 2009, 80, .	4.7	127
30	ADVANCED METHODS IN BLACK-HOLE PERTURBATION THEORY. International Journal of Modern Physics A, 2013, 28, 1340018.	1.5	124
31	Floating and Sinking: The Imprint of Massive Scalars around Rotating Black Holes. Physical Review Letters, 2011, 107, 241101.	7.8	120
32	Slowly rotating neutron stars in scalar-tensor theories. Physical Review D, 2014, 90, .	4.7	117
33	Rotating black holes in Einstein-dilaton-Gauss-Bonnet gravity with finite coupling. Physical Review D, 2015, 92, .	4.7	117
34	Surface Singularities in Eddington-Inspired Born-Infeld Gravity. Physical Review Letters, 2012, 109, 251102.	7.8	114
35	Black Holes with Surrounding Matter in Scalar-Tensor Theories. Physical Review Letters, 2013, 111, 111101.	7.8	112
36	Tidal deformations of a spinning compact object. Physical Review D, 2015, 92, .	4.7	110

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37	Gravitational wave signatures of highly compact boson star binaries. Physical Review D, 2017, 96, .	4.7	109
38	Astrophysical signatures of boson stars: Quasinormal modes and inspiral resonances. Physical Review D, 2013, 88, .	4.7	106
39	Eddington-inspired Born-Infeld gravity: Phenomenology of nonlinear gravity-matter coupling. Physical Review D, 2012, 85, .	4.7	103
40	TESTING ALTERNATIVE THEORIES OF GRAVITY USING THE SUN. Astrophysical Journal, 2012, 745, 15.	4.5	103
41	Phase transitions between Reissner-Nordstrom and dilatonic black holes in 4D AdS spacetime. Journal of High Energy Physics, 2010, 2010, 1.	4.7	99
42	Gravitational waves from quasicircular extreme mass-ratio inspirals as probes of scalar-tensor theories. Physical Review D, 2012, 85, .	4.7	99
43	Publisherâ€™s Note: Testing strong-field gravity with tidal Love numbers [Phys. Rev. D 95 , 084014 (2017)]. Physical Review D, 2017, 95, .	4.7	96
44	Probing Planckian Corrections at the Horizon Scale with LISA Binaries. Physical Review Letters, 2018, 120, 081101.	7.8	95
45	Matter around Kerr black holes in scalar-tensor theories: Scalarization and superradiant instability. Physical Review D, 2013, 88, .	4.7	92
46	Gravitational instabilities of superspinars. Physical Review D, 2010, 82, .	4.7	89
47	Constraining the primordial black hole scenario with Bayesian inference and machine learning: The GWTC-2 gravitational wave catalog. Physical Review D, 2021, 103, .	4.7	89
48	Tidal Love numbers of a slowly spinning neutron star. Physical Review D, 2015, 92, .	4.7	84
49	Anisotropic stars as ultracompact objects in general relativity. Physical Review D, 2019, 99, .	4.7	84
50	Black holes and gravitational waves in models of minicharged dark matter. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 054-054.	5.4	82
51	New horizons for fundamental physics with LISA. Living Reviews in Relativity, 2022, 25, .	26.7	82
52	On generic parametrizations of spinning black-hole geometries. Physical Review D, 2014, 89, .	4.7	81
53	Exotic compact objects and how to quench their ergoregion instability. Physical Review D, 2017, 96, .	4.7	73
54	Black holes with massive graviton hair. Physical Review D, 2013, 88, .	4.7	66

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55	Gravitoelectromagnetic Perturbations of Kerr-Newman Black Holes: Stability and Isospectrality in the Slow-Rotation Limit. Physical Review Letters, 2013, 110, 241103.	7.8	65
56	Ergoregion instability of exotic compact objects: Electromagnetic and gravitational perturbations and the role of absorption. Physical Review D, 2019, 99, .	4.7	64
57	TESTING GRAVITY WITH QUASI-PERIODIC OSCILLATIONS FROM ACCRETING BLACK HOLES: THE CASE OF THE EINSTEINâ€“DILATONâ€“GAUSSâ€“BONNET THEORY. Astrophysical Journal, 2015, 801, 115.	4.5	63
58	Tidal deformability and I-Love-Q relations for gravastars with polytropic thin shells. Physical Review D, 2016, 94, .	4.7	62
59	Black Hole Superradiant Instability from Ultralight Spin-2 Fields. Physical Review Letters, 2020, 124, 211101.	7.8	62
60	Instability of hyper-compact Kerr-like objects. Classical and Quantum Gravity, 2008, 25, 195010.	4.0	60
61	Scalar, electromagnetic, and gravitational perturbations of Kerr-Newman black holes in the slow-rotation limit. Physical Review D, 2013, 88, .	4.7	60
62	Ringdown overtones, black hole spectroscopy, and no-hair theorem tests. Physical Review D, 2020, 101, .	4.7	60
63	Superradiance. Lecture Notes in Physics, 2020, , .	0.7	60
64	Environmental Effects for Gravitational-wave Astrophysics. Journal of Physics: Conference Series, 2015, 610, 012044.	0.4	59
65	Tensor-multi-scalar theories: relativistic stars and 3 + 1 decomposition. Classical and Quantum Gravity, 2015, 32, 204001.	4.0	58
66	Gravitational waves from extreme mass-ratio inspirals in dynamical Chern-Simons gravity. Physical Review D, 2011, 83, .	4.7	57
67	Analytical template for gravitational-wave echoes: Signal characterization and prospects of detection with current and future interferometers. Physical Review D, 2018, 98, .	4.7	56
68	Axion boson stars. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 061-061.	5.4	56
69	Tidal capture of a primordial black hole by a neutron star: implications for constraints on dark matter. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 026-026.	5.4	55
70	How does a dark compact object ringdown?. Physical Review D, 2020, 102, .	4.7	55
71	I-Love-Q relations for gravastars and the approach to the black-hole limit. Physical Review D, 2015, 92, .	4.7	54
72	Spectroscopy of binary black hole ringdown using overtones and angular modes. Physical Review D, 2020, 102, .	4.7	53

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73	Holography of charged dilatonic black branes at finite temperature. Journal of High Energy Physics, 2011, 2011, 1.	4.7	52
74	Analytical model for gravitational-wave echoes from spinning remnants. Physical Review D, 2019, 100, .	4.7	52
75	Constraining primordial black-hole bombs through spectral distortions of the cosmic microwave background. Physical Review D, 2013, 88, .	4.7	51
76	Distinguishing Fuzzballs from Black Holes through Their Multipolar Structure. Physical Review Letters, 2020, 125, 221601.	7.8	51
77	NR/HEP: roadmap for the future. Classical and Quantum Gravity, 2012, 29, 244001.	4.0	50
78	Constraints on millicharged dark matter and axionlike particles from timing of radio waves. Physical Review D, 2019, 100, .	4.7	49
79	Parametrized ringdown spin expansion coefficients: A data-analysis framework for black-hole spectroscopy with multiple events. Physical Review D, 2020, 101, .	4.7	49
80	Tidal heating as a discriminator for horizons in extreme mass ratio inspirals. Physical Review D, 2020, 101, .	4.7	48
81	On gravitational-wave echoes from neutron-star binary coalescences. Classical and Quantum Gravity, 2018, 35, 15LT01.	4.0	47
82	Gravitational wave signatures of the absence of an event horizon. II. Extreme mass ratio inspirals in the spacetime of a thin-shell gravastar. Physical Review D, 2010, 81, .	4.7	46
83	Breit-Wigner resonances and the quasinormal modes of antiâ€“deÂSitter black holes. Physical Review D, 2009, 79, .	4.7	45
84	Superradiant instability of black holes immersed in a magnetic field. Physical Review D, 2014, 89, .	4.7	44
85	The stochastic gravitational-wave background in the absence of horizons. Classical and Quantum Gravity, 2018, 35, 20LT01.	4.0	43
86	Vacuum revealed: The final state of vacuum instabilities in compact stars. Physical Review D, 2011, 83, .	4.7	41
87	Geodesic Models of Quasi-periodic-oscillations as Probes of Quadratic Gravity. Astrophysical Journal, 2017, 843, 25.	4.5	40
88	Post-Newtonian spin-tidal couplings for compact binaries. Physical Review D, 2018, 98, .	4.7	39
89	Detecting fundamental fields with LISA observations of gravitational waves from extreme mass-ratio inspirals. Nature Astronomy, 2022, 6, 464-470.	10.1	39
90	Gravity with auxiliary fields. Physical Review D, 2013, 88, .	4.7	38

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91	Impact of high-order tidal terms on binary neutron-star waveforms. Physical Review D, 2018, 98, .	4.7	38
92	Superradiance in rotating stars and pulsar-timing constraints on dark photons. Physical Review D, 2017, 95, .	4.7	37
93	Extreme mass ratio inspirals with spinning secondary: A detailed study of equatorial circular motion. Physical Review D, 2020, 102, .	4.7	37
94	Tidal acceleration of black holes and superradiance. Classical and Quantum Gravity, 2013, 30, 045011.	4.0	35
95	Exotic compact objects with soft hair. Physical Review D, 2019, 99, .	4.7	35
96	The minimum testable abundance of primordial black holes at future gravitational-wave detectors. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 039.	5.4	35
97	Impact of multiple modes on the black-hole superradiant instability. Physical Review D, 2019, 99, .	4.7	34
98	Detectable Environmental Effects in GW190521-like Black-Hole Binaries with LISA. Physical Review Letters, 2021, 126, 101105.	7.8	34
99	Gravitational-wave Detection and Parameter Estimation for Accreting Black-hole Binaries and Their Electromagnetic Counterpart. Astrophysical Journal, 2020, 892, 90.	4.5	33
100	Black-hole microstate spectroscopy: Ringdown, quasinormal modes, and echoes. Physical Review D, 2021, 104, .	4.7	32
101	Love in extrema ratio. International Journal of Modern Physics D, 2019, 28, 1944001.	2.1	31
102	Towards numerical relativity in scalar Gauss-Bonnet gravity: <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>3</mml:mn><mml:mo>+</mml:mo><mml:mn>1</mml:mn></mml:math> decomposition beyond the small-coupling limit. Physical Review D, 2020, 101, .	4.7	31
103	Gravitational waves and kicks from the merger of unequal mass, highly compact boson stars. Physical Review D, 2022, 105, .	4.7	31
104	The multipolar structure of fuzzballs. Journal of High Energy Physics, 2021, 2021, 1.	4.7	30
105	Probing the nature of black holes: Deep in the mHz gravitational-wave sky. Experimental Astronomy, 2021, 51, 1385-1416.	3.7	29
106	Magnetic tidal Love numbers clarified. Physical Review D, 2018, 98, .	4.7	28
107	Partially massless gravitons do not destroy general relativity black holes. Physical Review D, 2013, 87, .	4.7	27
108	Accretion in strong field gravity with eXTP. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	5.1	27

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109	Tidal deformability of dressed black holes and tests of ultralight bosons in extended mass ranges. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 032.	5.4	26
110	Constraining High-redshift Stellar-mass Primordial Black Holes with Next-generation Ground-based Gravitational-wave Detectors. Astrophysical Journal Letters, 2022, 933, L41.	8.3	26
111	Binary pulsars as dark-matter probes. Physical Review D, 2015, 92, .	4.7	25
112	Extreme mass-ratio inspirals around a spinning horizonless compact object. Physical Review D, 2021, 104, .	4.7	25
113	Study of the nonlinear instability of confined geometries. Physical Review D, 2014, 90, .	4.7	24
114	Collapse of self-interacting fields in asymptotically flat spacetimes: Do self-interactions render Minkowski spacetime unstable?. Physical Review D, 2014, 89, .	4.7	24
115	The effect of mission duration on LISA science objectives. General Relativity and Gravitation, 2022, 54, 3.	2.0	24
116	Ranking Love Numbers for the Neutron Star Equation of State: The Need for Third-Generation Detectors. Physical Review Letters, 2022, 128, 101101.	7.8	24
117	Gravitational-wave detectors as particle-physics laboratories: Constraining scalar interactions with a coherent inspiral model of boson-star binaries. Physical Review D, 2020, 102, .	4.7	23
118	From micro to macro and back: probing near-horizon quantum structures with gravitational waves. Classical and Quantum Gravity, 2019, 36, 167001.	4.0	22
119	Electromagnetic signatures of dark photon superradiance. Physical Review D, 2021, 104, .	4.7	22
120	How to assess the primordial origin of single gravitational-wave events with mass, spin, eccentricity, and deformability measurements. Physical Review D, 2022, 105, .	4.7	22
121	Quasinormal modes of relativistic stars and interacting fields. Physical Review D, 2016, 93, .	4.7	21
122	The tune of the Universe: the role of plasma in tests of strong-field gravity. Monthly Notices of the Royal Astronomical Society, 2021, 503, 563-573.	4.4	21
123	Constraining black holes with light boson hair and boson stars using epicyclic frequencies and quasiperiodic oscillations. Physical Review D, 2017, 95, .	4.7	20
124	Anti de Sitter black holes and branes in dynamical Chern-Simons gravity: perturbations, stability and the hydrodynamic modes. Journal of High Energy Physics, 2011, 2011, 1.	4.7	19
125	Landscape of massive black-hole spectroscopy with LISA and the Einstein Telescope. Physical Review D, 2022, 105, .	4.7	19
126	Black holes in Einstein-GauÃŸ-Bonnet-dilaton theory. Proceedings of the International Astronomical Union, 2016, 12, 265-272.	0.0	18

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127	Assessing the detectability of the secondary spin in extreme mass-ratio inspirals with fully relativistic numerical waveforms. Physical Review D, 2021, 104, .	4.7	18
128	A New Method to Constrain Neutron Star Structure from Quasi-periodic Oscillations. Astrophysical Journal, 2020, 899, 139.	4.5	17
129	Searching for mass-spin correlations in the population of gravitational-wave events: The GWTC-3 case study. Physical Review D, 2022, 105, .	4.7	17
130	Gravitational-wave signature of a thin-shell gravastar. Journal of Physics: Conference Series, 2010, 222, 012032.	0.4	14
131	Detecting Subsolar-Mass Primordial Black Holes in Extreme Mass-Ratio Inspirals with LISA and Einstein Telescope. Physical Review Letters, 2022, 128, 111104.	7.8	14
132	Linear stability of nonbidiagonal black holes in massive gravity. Physical Review D, 2016, 93, .	4.7	13
133	Plasma-photon interaction in curved spacetime: Formalism and quasibound states around nonspinning black holes. Physical Review D, 2021, 103, .	4.7	13
134	Tidal effects around higher-dimensional black holes. Physical Review D, 2012, 86, .	4.7	12
135	Plasma-photon interaction in curved spacetime. II. Collisions, thermal corrections, and superradiant instabilities. Physical Review D, 2021, 104, .	4.7	12
136	Compact elastic objects in general relativity. Physical Review D, 2022, 105, .	4.7	12
137	Radiating black holes in Einstein-Maxwell-dilaton theory and cosmic censorship violation. Journal of High Energy Physics, 2016, 2016, 1.	4.7	11
138	Nonsingular solutions and instabilities in Einstein-scalar-Gauss-Bonnet cosmology. Physical Review D, 2017, 96, .	4.7	11
139	Holographic collisions in confining theories. Journal of High Energy Physics, 2014, 2014, 1.	4.7	10
140	Model independent tests of the Kerr bound with extreme mass ratio inspirals. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 811, 135860.	4.1	10
141	Challenging cosmic censorship in Einstein-Maxwell-scalar theory with numerically simulated gedanken experiments. Physical Review D, 2021, 104, .	4.7	10
142	Axisymmetric deformations of neutron stars and gravitational-wave astronomy. Physical Review D, 2020, 102, .	4.7	9
143	Multipolar structure of rotating boson stars. Physical Review D, 2022, 105, .	4.7	9
144	Impact and detectability of spin-tidal couplings in neutron star inspirals. Physical Review D, 2022, 106, .	4.7	9

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145	Infrared behavior of scalar condensates in effective holographic theories. Journal of High Energy Physics, 2013, 2013, 1.	4.7	7
146	Higher curvature brane corrections to the DGP model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 674, 308-312.	4.1	6
147	Hidden symmetry between rotational tidal Love numbers of spinning neutron stars. Physical Review D, 2021, 104, .	4.7	6
148	Testing the Nature of Dark Compact Objects with Gravitational Waves. , 2021, , 1-37.		6
149	Scalar hairs and exact vortex solutions in 3D AdS gravity. Journal of High Energy Physics, 2010, 2010, 1.	4.7	5
150	Applications of black hole perturbation theory. European Physical Journal Plus, 2012, 127, 1.	2.6	5
151	Superradiant instability of the Kerr brane. Journal of High Energy Physics, 2015, 2015, 1.	4.7	5
152	Superradiance in Black Hole Physics. Lecture Notes in Physics, 2015, , 35-95.	0.7	5
153	Inspiraling compact objects with generic deformations. Physical Review D, 2022, 105, .	4.7	4
154	Acoustic horizons for axially and spherically symmetric fluid flow. Classical and Quantum Gravity, 2006, 23, 2427-2433.	4.0	3
155	Fundamental Physics in the Gravitational-Wave Era. Nuclear Physics News, 2022, 32, 16-19.	0.4	3
156	Black Hole Superradiance in Astrophysics. Lecture Notes in Physics, 2015, , 157-211.	0.7	2
157	Superradiant instabilities by accretion disks in scalar-tensor theories. Physical Review D, 2022, 106, .	4.7	2
158	Evidence for event horizons: Long-lived modes in ultracompact objects. International Journal of Modern Physics D, 2015, 24, 1542023.	2.1	1
159	Black Holes and Superradiant Instabilities. Lecture Notes in Physics, 2015, , 97-155.	0.7	1
160	Superradiance in Flat Spacetime. Lecture Notes in Physics, 2020, , 13-37.	0.7	1
161	PERTURBATIONS OF SPINNING BLACK HOLES: SLOW-ROTATION FRAMEWORK. , 2015, , .		0
162	Recent developments in the tidal deformability of spinning compact objects. International Journal of Modern Physics D, 2016, 25, 1641001.	2.1	0

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163	Black-Hole Superradiance: Searching for Ultralight Bosons with Gravitational Waves. , 2021, , 1-33.		0
164	GRAVITATIONAL FIELDS WITH SOURCES, REGULAR BLACK HOLES, QUASIBLACK HOLES, AND ANALOGUE BLACK HOLES. , 2015, , .		0
165	Superradiance in Flat Spacetime. Lecture Notes in Physics, 2015, , 11-33.	0.7	0
166	Black Hole Superradiance in Astrophysics. Lecture Notes in Physics, 2020, , 199-265.	0.7	0
167	Superradiance in Black-Hole Physics. Lecture Notes in Physics, 2020, , 39-106.	0.7	0
168	Black Holes and Superradiant Instabilities. Lecture Notes in Physics, 2020, , 107-198.	0.7	0
169	Testing the Nature of Dark Compact Objects with Gravitational Waves. , 2022, , 1139-1175.		0
170	Black-Hole Superradiance: Searching for Ultralight Bosons with Gravitational Waves. , 2022, , 1377-1410.		0