

# Matthew A Hopcroft

## List of Publications by Year in descending order

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24  
papers

3,325  
citations

516710

16  
h-index

794594

19  
g-index

24  
all docs

24  
docs citations

24  
times ranked

3386  
citing authors

#	ARTICLE	IF	CITATIONS
1	What is the Young's Modulus of Silicon?. Journal of Microelectromechanical Systems, 2010, 19, 229-238.	2.5	1,762
2	Temperature Dependence of Quality Factor in MEMS Resonators. Journal of Microelectromechanical Systems, 2008, 17, 755-766.	2.5	208
3	Temperature-Insensitive Composite Micromechanical Resonators. Journal of Microelectromechanical Systems, 2009, 18, 1409-1419.	2.5	202
4	Long-Term and Accelerated Life Testing of a Novel Single-Wafer Vacuum Encapsulation for MEMS Resonators. Journal of Microelectromechanical Systems, 2006, 15, 1446-1456.	2.5	183
5	Temperature-compensated aluminum nitride lamb wave resonators. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 524-532.	3.0	156
6	Frequency stability of wafer-scale film encapsulated silicon based MEMS resonators. Sensors and Actuators A: Physical, 2007, 136, 125-131.	4.1	114
7	Temperature-compensated high-stability silicon resonators. Applied Physics Letters, 2007, 90, 244107.	3.3	109
8	Thermally compensated aluminum nitride Lamb wave resonators for high temperature applications. Applied Physics Letters, 2010, 97, .	3.3	103
9	AlN thin films grown on epitaxial 3C-SiC (100) for piezoelectric resonant devices. Applied Physics Letters, 2010, 97, 141907.	3.3	73
10	Thermal Isolation of Encapsulated MEMS Resonators. Journal of Microelectromechanical Systems, 2008, 17, 175-184.	2.5	67
11	Optimal drive condition for nonlinearity reduction in electrostatic microresonators. Applied Physics Letters, 2006, 89, 214105.	3.3	60
12	Scaling of amplitude-frequency-dependence nonlinearities in electrostatically transduced microresonators. Journal of Applied Physics, 2007, 102, .	2.5	52
13	A study of electrostatic force nonlinearities in resonant microstructures. Applied Physics Letters, 2008, 92, .	3.3	45
14	Model and Observations of Dielectric Charge in Thermally Oxidized Silicon Resonators. Journal of Microelectromechanical Systems, 2010, 19, 162-174.	2.5	37
15	Composite flexural-mode resonator with controllable turnover temperature. , 2007, , .		33
16	Nonlinear Characterization of Electrostatic MEMS Resonators. , 2006, , .		27
17	Hermeticity and diffusion investigation in polysilicon film encapsulation for microelectromechanical systems. Journal of Applied Physics, 2009, 105, .	2.5	25
18	Multifunctional Integrated Sensors for Multiparameter Monitoring Applications. Journal of Microelectromechanical Systems, 2015, 24, 810-821.	2.5	25

#	ARTICLE	IF	CITATIONS
19	Si-SiO <sub>2</sub> Composite MEMS Resonators in CMOS Compatible Wafer-scale Thin-Film Encapsulation. , 2007, , .		15
20	Electrostatic Tuning to Achieve Higher Stability Microelectromechanical Composite Resonators. Journal of Microelectromechanical Systems, 2011, 20, 1355-1365.	2.5	13
21	Acceleration sensitivity in beam-type electrostatic microresonators. Applied Physics Letters, 2007, 90, 014103.	3.3	8
22	Influence of the temperature dependent nonlinearities on the performance of micromechanical resonators. Applied Physics Letters, 2011, 99, .	3.3	7
23	Influence of the temperature dependent A-f effect on the design and performance of oscillators. , 2010, , .		1
24	Investigation of Orientation Dependence of the Thermal Expansion Coefficient in Silicon MEMS Resonators. , 2018, , .		0