

# Douglas T Smith

## List of Publications by Year in descending order

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Version: 2024-02-01

40  
papers

2,603  
citations

279798

23  
h-index

315739

38  
g-index

40  
all docs

40  
docs citations

40  
times ranked

2311  
citing authors

| #  | ARTICLE                                                                                                                                                                                  | IF   | CITATIONS |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1  | Indentation Damage and Mechanical Properties of Human Enamel and Dentin. Journal of Dental Research, 1998, 77, 472-480.                                                                  | 5.2  | 497       |
| 2  | Surface forces and viscosity of water measured between silica sheets. Chemical Physics Letters, 1989, 162, 404-408.                                                                      | 2.6  | 392       |
| 3  | Contact Electrification and Adhesion Between Dissimilar Materials. Science, 1992, 256, 362-364.                                                                                          | 12.6 | 294       |
| 4  | Contact electrification induced by monolayer modification of a surface and relation to acid-base interactions. Nature, 1993, 366, 442-443.                                               | 27.8 | 187       |
| 5  | Effects of different whiskers on the reinforcement of dental resin composites. Dental Materials, 2003, 19, 359-367.                                                                      | 3.5  | 109       |
| 6  | Review of SI traceable force metrology for instrumented indentation and atomic force microscopy. Measurement Science and Technology, 2005, 16, 2129-2137.                                | 2.6  | 105       |
| 7  | Fracture and Contact Adhesion Energies of Mica-Mica, Silica-Silica, and Mica-Silica Interfaces in Dry and Moist Atmospheres. Journal of the American Ceramic Society, 1992, 75, 667-676. | 3.8  | 90        |
| 8  | Dental resin composites containing silica-fused whiskers—effects of whisker-to-silica ratio on fracture toughness and indentation properties. Biomaterials, 2002, 23, 735-742.           | 11.4 | 82        |
| 9  | Third Sound in He4 Adsorbed on Nuclepore. Physical Review Letters, 1985, 54, 1528-1531.                                                                                                  | 7.8  | 72        |
| 10 | Strong and bioactive composites containing nano-silica-fused whiskers for bone repair. Biomaterials, 2004, 25, 4615-4626.                                                                | 11.4 | 69        |
| 11 | Progress toward Syst me International d'Unit s traceable force metrology for nanomechanics. Journal of Materials Research, 2004, 19, 366-379.                                            | 2.6  | 67        |
| 12 | Indentation modulus and hardness of whisker-reinforced heat-cured dental resin composites. Dental Materials, 2000, 16, 248-254.                                                          | 3.5  | 54        |
| 13 | Influence of microstructure on indentation and machining of dental glass-ceramics. Journal of Materials Research, 1996, 11, 2325-2337.                                                   | 2.6  | 48        |
| 14 | Analytic solution for the three-layer multiple beam interferometer. Applied Optics, 1991, 30, 59.                                                                                        | 2.1  | 47        |
| 15 | Mechanical properties of SiO 2 and Si 3 N 4 coatings: a BAM/NIST co-operative project. Thin Solid Films, 1998, 332, 164-171.                                                             | 1.8  | 47        |
| 16 | Effect of beam voltage on the properties of aluminium nitride prepared by ion beam assisted deposition. Journal of Materials Science: Materials in Electronics, 1996, 7, 247-253.        | 2.2  | 41        |
| 17 | Sputtered amorphous carbon nitride films. Journal of Materials Research, 1995, 10, 3079-3083.                                                                                            | 2.6  | 38        |
| 18 | Contact mechanics of layered elastic materials: experiment and theory. Journal Physics D: Applied Physics, 2007, 40, 5984-5994.                                                          | 2.8  | 38        |

| #  | ARTICLE                                                                                                                                                                                       | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Adsorption and capillary condensation of He4 on Nuclepore: Third-sound and capacitance measurements. <i>Physical Review B</i> , 1987, 36, 202-216.                                            | 3.2 | 31        |
| 20 | Third Sound on Substrates Patterned with Periodic and Random Disorder: Evidence for Classical Wave Localization. <i>Physical Review Letters</i> , 1988, 61, 1286-1289.                        | 7.8 | 31        |
| 21 | Measuring surface forces to explore surface chemistry: Mica, sapphire and silica. <i>Journal of Non-Crystalline Solids</i> , 1990, 120, 72-81.                                                | 3.1 | 31        |
| 22 | Effect of thermal cycling on whisker-reinforced dental resin composites. <i>Journal of Materials Science: Materials in Medicine</i> , 2002, 13, 875-883.                                      | 3.6 | 29        |
| 23 | Third-sound propagation in He4 films adsorbed on silicon. <i>Physical Review B</i> , 1986, 34, 226-232.                                                                                       | 3.2 | 27        |
| 24 | Third sound on patterned substrates. I. Periodic and quasiperiodic arrays. <i>Physical Review B</i> , 1989, 40, 6634-6647.                                                                    | 3.2 | 22        |
| 25 | c-Boron aluminum nitride alloys prepared by ion-beam assisted deposition. <i>Thin Solid Films</i> , 1997, 298, 33-38.                                                                         | 1.8 | 22        |
| 26 | Measuring contact charge transfer at interfaces: a new experimental technique. <i>Journal of Electrostatics</i> , 1991, 26, 291-308.                                                          | 1.9 | 19        |
| 27 | Electron Transport in Gold Nanowires: Stable 1-, 2- and 3-Dimensional Atomic Structures and Noninteger Conduction States. <i>Physical Review Letters</i> , 2011, 107, 126802.                 | 7.8 | 19        |
| 28 | Title is missing!. <i>Journal of Materials Science: Materials in Electronics</i> , 1997, 8, 307-312.                                                                                          | 2.2 | 14        |
| 29 | Third sound on patterned substrates. II. Random arrays and classical wave localization. <i>Physical Review B</i> , 1989, 40, 6648-6658.                                                       | 3.2 | 13        |
| 30 | Comment on Fractal Aggregates in Sputter-Deposited Films. <i>Physical Review Letters</i> , 1985, 54, 2646-2646.                                                                               | 7.8 | 12        |
| 31 | Whisker-reinforced dental core buildup composites: Effect of filler level on mechanical properties. <i>Journal of Biomedical Materials Research Part B</i> , 2000, 52, 812-818.               | 3.1 | 12        |
| 32 | Accurate spring constant calibration for very stiff atomic force microscopy cantilevers. <i>Review of Scientific Instruments</i> , 2013, 84, 113706.                                          | 1.3 | 12        |
| 33 | Quantifying Local Microcrack Density in Ceramics: A Comparison of Instrumented Indentation and Thermal Wave Techniques. <i>Journal of the American Ceramic Society</i> , 1995, 78, 1301-1304. | 3.8 | 9         |
| 34 | A Piezoresistive Cantilever Force Sensor for Direct AFM Force Calibration. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1021, 1.                                            | 0.1 | 6         |
| 35 | Vortex pinning in microindented YBa2Cu3O7-x single crystals. <i>Journal of Applied Physics</i> , 2000, 88, 1541-1546.                                                                         | 2.5 | 5         |
| 36 | Surface Forces and Adhesion Between Dissimilar Materials Measured in Various Environments. <i>Materials Research Society Symposia Proceedings</i> , 1989, 170, 3.                             | 0.1 | 4         |

| #  | ARTICLE                                                                                                                                                                                       | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Effect of the Spherical Indenter Tip Assumption on the Initial Plastic Yield Stress. , 0, , .                                                                                                 |     | 4         |
| 38 | Al <sub>2</sub> O <sub>3</sub> aggregate growth from an air suspension. Physical Review A, 1985, 32, 3118-3119.                                                                               | 2.5 | 3         |
| 39 | Nanomechanical standards based on the intrinsic mechanics of molecules and atoms. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 1-7.                              | 0.5 | 1         |
| 40 | Hysteretic capillary condensation of <sup>4</sup> He on Nuclepore substrates: simultaneous third-sound and direct-capacitance measurements. Canadian Journal of Physics, 1987, 65, 1566-1568. | 1.1 | 0         |