Birgitta Ruth Knudsen

List of Publications by Year
in descending order

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Version: 2024-02-01

75 papers	2,115 citations	201658 27 h-index	243610 44 g-index
75 all docs	75 docs citations	75 times ranked	2461 citing authors

#	Article	IF	Citations
1	Dynamics of human DNA topoisomerases IIÎ± and IIÎ² in living cells. Journal of Cell Biology, 2002, 157, 31-44.	5.2	190
2	Cell Cycleâ€“coupled Relocation of Types I and II Topoisomerases and Modulation of Catalytic Enzyme Activities. Journal of Cell Biology, 1997, 136, 775-788.	5.2	138
3	Temperature-Controlled Encapsulation and Release of an Active Enzyme in the Cavity of a Self-Assembled DNA Nanocage. ACS Nano, 2013, 7, 9724-9734.	14.6	132
4	Assembly and structural analysis of a covalently closed nano-scale DNA cage. Nucleic Acids Research, 2008, 36, 1113-1119.	14.5	112
5	The RNA-splicing Factor PSF/p54 Controls DNA-Topoisomerase I Activity by a Direct Interaction. Journal of Biological Chemistry, 1998, 273, 26261-26264.	3.4	82
6	Droplet Microfluidics Platform for Highly Sensitive and Quantitative Detection of Malaria-Causing Plasmodium Parasites Based on Enzyme Activity Measurement. ACS Nano, 2012, 6, 10676-10683.	14.6	81
7	Receptor-Mediated Entry of Pristine Octahedral DNA Nanocages in Mammalian Cells. ACS Nano, 2016, 10, 5971-5979.	14.6	76
8	Synthesis of Fluorosurfactants for Emulsion-Based Biological Applications. ACS Nano, 2014, 8, 3913-3920.	14.6	57
9	Single-Molecule Detection of Human Topoisomerase I Cleavageâ^'Ligation Activity. ACS Nano, 2009, 3, 223-233.	14.6	51
10	Residues within the N-terminal Domain of Human Topoisomerase I Play a Direct Role in Relaxation*. Journal of Biological Chemistry, 2001, 276, 20220-20227.	3.4	49
11	Detection of Single Enzymatic Events in Rare or Single Cells Using Microfluidics. ACS Nano, 2011, 5, 8305-8310.	14.6	48
12	Structure of Nanoscale Truncated Octahedral DNA Cages: Variation of Single-Stranded Linker Regions and Influence on Assembly Yields. ACS Nano, 2010, 4, 1367-1376.	14.6	47
13	Strategies for highly sensitive biomarker detection by Rolling Circle Amplification of signals from nucleic acid composed sensors. Integrative Biology (United Kingdom), 2011, 3, 982.	1.3	45
14	Real-Time Label-Free Direct Electronic Monitoring of Topoisomerase Enzyme Binding Kinetics on Graphene. ACS Nano, 2015, 9, 11166-11176.	14.6	43
15	PSF/p54nrbStimulates â€œJumpingâ€•of DNA Topoisomerase I between Separate DNA Helicesâ€. Biochemistry, 2000, 39, 7552-7558.	2.5	41
16	Real-time detection of TDP1 activity using a fluorophoreâ€“quencher coupled DNA-biosensor. Biosensors and Bioelectronics, 2013, 48, 230-237.	10.1	41
17	Synthesis and biological evaluation of indeno[1,5]naphthyridines as topoisomerase I (TopI) inhibitors with antiproliferative activity. European Journal of Medicinal Chemistry, 2016, 115, 179-190.	5.5	41
18	Camptothecins Inhibit the Utilization of Hydrogen Peroxide in the Ligation Step of Topoisomerase I Catalysisâ€. Biochemistry, 1998, 37, 10815-10827.	2.5	39

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19	Changes in Mobility Account for Camptothecin-induced Subnuclear Relocation of Topoisomerase I. Journal of Biological Chemistry, 2002, 277, 15661-15665.	3.4	37
20	Molecular characterization of irinotecan (SN-38) resistant human breast cancer cell lines. BMC Cancer, 2016, 16, 34.	2.6	35
21	A Novel Secondary DNA Binding Site in Human Topoisomerase I Unravelled by using a 2D DNA Origami Platform. ACS Nano, 2010, 4, 5969-5977.	14.6	33
22	Quantum dot-based nanosensors for diagnosis via enzyme activity measurement. Expert Review of Molecular Diagnostics, 2013, 13, 367-375.	3.1	33
23	NanoCluster Beacons as reporter probes in rolling circle enhanced enzyme activity detection. Nanoscale, 2015, 7, 8332-8337.	5.6	32
24	Regions within the N-terminal Domain of Human Topoisomerase I Exert Important Functions During Strand Rotation and DNA Binding. Journal of Molecular Biology, 2004, 336, 93-103.	4.2	31
25	Topoisomerase I activity and sensitivity to camptothecin in breast cancer-derived cells: a comparative study. BMC Cancer, 2019, 19, 1158.	2.6	31
26	Multiplexed Detection of Site Specific Recombinase and DNA Topoisomerase Activities at the Single Molecule Level. ACS Nano, 2009, 3, 4043-4054.	14.6	30
27	DNA hairpins promote temperature controlled cargo encapsulation in a truncated octahedral nanocage structure family. Nanoscale, 2016, 8, 13333-13341.	5.6	28
28	The RNA Splicing Factor ASF/SF2 Inhibits Human Topoisomerase I Mediated DNA Relaxation. Journal of Molecular Biology, 2002, 322, 677-686.	4.2	26
29	Separation and functional analysis of eukaryotic DNA topoisomerases by chromatography and electrophoresis. Biomedical Applications, 1996, 684, 307-321.	1.7	25
30	Deciphering the Structural Properties That Confer Stability to a DNA Nanocage. ACS Nano, 2009, 3, 1813-1822.	14.6	25
31	The geometry of DNA supercoils modulates the DNA cleavage activity of human topoisomerase I. Nucleic Acids Research, 2011, 39, 1014-1022.	14.5	24
32	Correlation between topoisomerase I and tyrosyl-DNA phosphodiesterase 1 activities in non-small cell lung cancer tissue. Experimental and Molecular Pathology, 2015, 99, 56-64.	2.1	23
33	Characterization of DNA topoisomerase I in three SN-38 resistant human colon cancer cell lines reveals a new pair of resistance-associated mutations. Journal of Experimental and Clinical Cancer Research, 2016, 35, 56.	8.6	23
34	The Transducer Domain Is Important for Clamp Operation in Human DNA Topoisomerase IIÎ±. Journal of Biological Chemistry, 2004, 279, 1684-1691.	3.4	22
35	Decreased Camptothecin Sensitivity of the Stem-Cell-Like Fraction of Caco2 Cells Correlates with an Altered Phosphorylation Pattern of Topoisomerase I. PLoS ONE, 2014, 9, e99628.	2.5	22
36	Synthesis of novel hybrid quinolino[4,3-b][1,5]naphthyridines and quinolino[4,3-b][1,5]naphthyridin-6(5H)-one derivatives and biological evaluation as topoisomerase I inhibitors and antiproliferatives. European Journal of Medicinal Chemistry, 2020, 195, 112292.	5.5	21

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37	Detection of the Malaria causing Plasmodium Parasite in Saliva from Infected Patients using Topoisomerase I Activity as a Biomarker. Scientific Reports, 2018, 8, 4122.	3.3	20
38	Topoisomerase I as a Biomarker: Detection of Activity at the Single Molecule Level. Sensors, 2014, 14, 1195-1207.	3.8	18
39	Simulative Analysis of a Truncated Octahedral DNA Nanocage Family Indicates the Single-Stranded Thymidine Linkers as the Major Player for the Conformational Variability. Journal of Physical Chemistry C, 2011, 115, 16819-16827.	3.1	14
40	DNA-Based Sensor for Real-Time Measurement of the Enzymatic Activity of Human Topoisomerase I. Sensors, 2013, 13, 4017-4028.	3.8	14
41	The Effects of Dithiothreitol on DNA. Sensors, 2017, 17, 1201.	3.8	14
42	Real-time investigation of human topoisomerase I reaction kinetics using an optical sensor: a fast method for drug screening and determination of active enzyme concentrations. Nanoscale, 2015, 7, 9825-9834.	5.6	13
43	Resolution of Holliday Junction Substrates by Human Topoisomerase I. Journal of Molecular Biology, 2007, 365, 1076-1092.	4.2	12
44	Comparative simulative analysis of single and double stranded truncated octahedral DNA nanocages. RSC Advances, 2016, 6, 35160-35166.	3.6	12
45	Advantages of an optical nanosensor system for the mechanistic analysis of a novel topoisomerase I targeting drug: a case study. Nanoscale, 2017, 9, 1886-1895.	5.6	12
46	Fused chromeno and quinolino[1,8]naphthyridines: Synthesis and biological evaluation as topoisomerase I inhibitors and antiproliferative agents. Bioorganic and Medicinal Chemistry, 2021, 40, 116177.	3.0	11
47	Genetic and Molecular Characterization of the Immortalized Murine Hepatic Stellate Cell Line GRX. Cells, 2022, 11, 1504.	4.1	11
48	Recombinogenic Flap Ligation Mediated by Human Topoisomerase I. Journal of Molecular Biology, 2003, 330, 235-246.	4.2	10
49	Quantum dot based DNA nanosensors for amplification-free detection of human topoisomerase I. RSC Advances, 2014, 4, 2491-2494.	3.6	10
50	Specific detection of the cleavage activity of mycobacterial enzymes using a quantum dot based DNA nanosensor. Nanoscale, 2016, 8, 358-364.	5.6	10
51	Novel DNA sensor system for highly sensitive and quantitative retrovirus detection using virus encoded integrase as a biomarker. Nanoscale, 2017, 9, 440-448.	5.6	10
52	A new DNA sensor system for specific and quantitative detection of mycobacteria. Nanoscale, 2019, 11, 587-597.	5.6	10
53	Optimized Detection of Plasmodium falciparum Topoisomerase I Enzyme Activity in a Complex Biological Sample by the Use of Molecular Beacons. Sensors, 2016, 16, 1916.	3.8	9
54	Interlinked DNA nano-circles for measuring topoisomerase II activity at the level of single decatenation events. Nucleic Acids Research, 2017, 45, 7855-7869.	14.5	9

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55	Novel phosphine sulphide gold(<scp>i</scp>) complexes: topoisomerase I inhibitors and antiproliferative agents. Dalton Transactions, 2020, 49, 7852-7861.	3.3	9
56	Specific detection of topoisomerase i from the malaria causing P. falciparum parasite using isothermal Rolling Circle Amplification. , 2012, 2012, 2416-9.		8
57	Refined Method for Droplet Microfluidics-Enabled Detection of Plasmodium falciparum Encoded Topoisomerase I in Blood from Malaria Patients. Micromachines, 2015, 6, 1505-1513.	2.9	8
58	Different Camptothecin Sensitivities in Subpopulations of Colon Cancer Cells Correlate with Expression of Different Phospho-Isoforms of Topoisomerase I with Different Activities. Cancers, 2020, 12, 1240.	3.7	7
59	Hybrid Quinolinyl Phosphonates as Heterocyclic Carboxylate Isosteres: Synthesis and Biological Evaluation against Topoisomerase 1B (TOP1B). Pharmaceuticals, 2021, 14, 784.	3.8	7
60	Rolling circle amplification-based detection of human topoisomerase I activity on magnetic beads. Analytical Biochemistry, 2014, 451, 42-44.	2.4	6
61	On-slide detection of enzymatic activities in selected single cells. Nanoscale, 2017, 9, 13546-13553.	5.6	6
62	DNA flowerstructure co-localizes with human pathogens in infected macrophages. Nucleic Acids Research, 2020, 48, 6081-6091.	14.5	5
63	Synthesis of hybrid phosphorated indenoquinolines and biological evaluation as topoisomerase I inhibitors and antiproliferative agents. Bioorganic and Medicinal Chemistry Letters, 2022, 57, 128517.	2.2	5
64	Characterization of Camptothecin-induced Genomic Changes in the Camptothecin-resistant T-ALL-derived Cell Line CPT-K5. Cancer Genomics and Proteomics, 2018, 15, 91-114.	2.0	4
65	Microfluidics-mediated isothermal detection of enzyme activity at the single molecule level. , 2011, 2011, 3258-61.		3
66	Enzymatic activity in single cells. Methods in Enzymology, 2019, 628, 43-57.	1.0	3
67	Simple and Fast DNA Based Sensor System for Screening of Small-Molecule Compounds Targeting Eukaryotic Topoisomerase 1. Pharmaceutics, 2021, 13, 1255.	4.5	3
68	DNA Sensors for Malaria Diagnosis. Nano LIFE, 2015, 05, 1541003.	0.9	2
69	Microfluidics-Enabled Enzyme Activity Measurement in Single Cells. Methods in Molecular Biology, 2015, 1346, 209-219.	0.9	2
70	TDP1 and TOP1 as targets in anticancer treatment of NSCLC: Activity and protein level in normal and tumor tissue from 150 NSCLC patients correlated to clinical data. Lung Cancer, 2022, 164, 23-32.	2.0	2
71	Single cell enzyme diagnosis on the chip. , 2013, , .		1
72	A Dual-Sensor-Based Screening System for In Vitro Selection of TDP1 Inhibitors. Sensors, 2021, 21, 4832.	3.8	1

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73	Extraction of active enzymes from “hard-to-break-cells”: Evaluation by a RCA-based assay. , 2014, , .		0
74	Microfluidics-based Single Cell Analytical Platforms for Characterization of Cancer. Advances in Delivery Science and Technology, 2016, , 77-95.	0.4	0
75	DNA Sensors for the Detection of Biomolecules and Biochemical Conditions. , 2017, , 57-97.		0