Xavier Darzacq

List of Publications by Citations

110 papers	10,248 citations	49 h-index	101 g-index
135 ext. papers	13,162 ext. citations	12.3 avg, IF	6.49 L-index

#	Paper	IF	Citations
110	Phase separation drives heterochromatin domain formation. *Nature*, **2017**, 547, 241-245	50.4	949
109	In vivo dynamics of RNA polymerase II transcription. *Nature Structural and Molecular Biology*, **2007**, 14, 796-806	17.6	497
108	Imaging dynamic and selective low-complexity domain interactions that control gene transcription. *Science*, **2018**, 361,	33.3	454
107	Dynamics of single mRNPs in nuclei of living cells. *Science*, **2004**, 304, 1797-800	33.3	433
106	Cajal body-specific small nuclear RNAs: a novel class of 2'-O-methylation and pseudouridylation guide RNAs. *EMBO Journal*, **2002**, 21, 2746-56	13	363
105	Real-time dynamics of RNA polymerase II clustering in live human cells. *Science*, **2013**, 341, 664-7	33.3	305
104	CTCF and cohesin regulate chromatin loop stability with distinct dynamics. *ELife*, **2017**, 6,	8.9	299
103	RNA polymerase II clustering through carboxy-terminal domain phase separation. *Nature Structural and Molecular Biology*, **2018**, 25, 833-840	17.6	288
102	Overcoming the bottleneck to widespread testing: a rapid review of nucleic acid testing approaches for COVID-19 detection. *Rna*, **2020**, 26, 771-783	5.8	281
101	Phase-separation mechanism for C-terminal hyperphosphorylation of RNA polymerase II. *Nature*, **2018**, 558, 318-323	50.4	272
100	Fast multicolor 3D imaging using aberration-corrected multifocus microscopy. *Nature Methods*, **2013**, 10, 60-3	21.6	269
99	A transgenic mouse for in vivo detection of endogenous labeled mRNA. *Nature Methods*, **2011**, 8, 165-70	21.6	268
98	Dynamic sorting of nuclear components into distinct nucleolar caps during transcriptional inhibition. *Molecular Biology of the Cell*, **2005**, 16, 2395-413	3.5	257
97	Gene expression is circular: factors for mRNA degradation also foster mRNA synthesis. *Cell*, **2013**, 153, 1000-11	56.2	233
96	FISH-quant: automatic counting of transcripts in 3D FISH images. *Nature Methods*, **2013**, 10, 277-8	21.6	225
95	Evaluating phase separation in live cells: diagnosis, caveats, and functional consequences. *Genes and Development*, **2019**, 33, 1619-1634	12.6	221
94	Single-molecule tracking in live cells reveals distinct target-search strategies of transcription factors in the nucleus. *ELife*, **2014**, 3,	8.9	196

93	Modification of Sm small nuclear RNAs occurs in the nucleoplasmic Cajal body following import from the cytoplasm. *EMBO Journal*, **2003**, 22, 1878-88	13	188
92	Transcription factors modulate c-Fos transcriptional bursts. *Cell Reports*, **2014**, 8, 75-83	10.6	169
91	Quantitative nanoscopy of inhibitory synapses: counting gephyrin molecules and receptor binding sites. *Neuron*, **2013**, 79, 308-21	13.9	158
90	A common sequence motif determines the Cajal body-specific localization of box H/ACA scaRNAs. *EMBO Journal*, **2003**, 22, 4283-93	13	158
89	A single-molecule view of transcription reveals convoys of RNA polymerases and multi-scale bursting. *Nature Communications*, **2016**, 7, 12248	17.4	152
88	The in vivo kinetics of RNA polymerase II elongation during co-transcriptional splicing. *PLoS Biology*, **2011**, 9, e1000573	9.7	150
87	Mutations in the promoter of the telomerase gene contribute to tumorigenesis by a two-step mechanism. *Science*, **2017**, 357, 1416-1420	33.3	149
86	A dynamic mode of mitotic bookmarking by transcription factors. *ELife*, **2016**, 5,	8.9	148
85	Resolving the 3D Landscape of Transcription-Linked Mammalian Chromatin Folding. *Molecular Cell*, **2020**, 78, 539-553.e8	17.6	143
84	Live cell imaging of low- and non-repetitive chromosome loci using CRISPR-Cas9. *Nature Communications*, **2017**, 8, 14725	17.4	139
83	Stepwise RNP assembly at the site of H/ACA RNA transcription in human cells. *Journal of Cell Biology*, **2006**, 173, 207-18	7.3	136
82	Nucleolar factors direct the 2′-O-ribose methylation and pseudouridylation of U6 spliceosomal RNA. *Molecular and Cellular Biology*, **1999**, 19, 6906-17	4.8	136
81	Evidence for DNA-mediated nuclear compartmentalization distinct from phase separation. *ELife*, **2019**, 8,	8.9	128
80	Probing the target search of DNA-binding proteins in mammalian cells using TetR as model searcher. *Nature Communications*, **2015**, 6, 7357	17.4	127
79	Super-resolution dynamic imaging of dendritic spines using a low-affinity photoconvertible actin probe. *PLoS ONE*, **2011**, 6, e15611	3.7	120
78	Recent evidence that TADs and chromatin loops are dynamic structures. *Nucleus*, **2018**, 9, 20-32	3.9	116
77	PSF shaping using adaptive optics for three-dimensional single-molecule super-resolution imaging and tracking. *Optics Express*, **2012**, 20, 4957-67	3.3	109
76	Robust model-based analysis of single-particle tracking experiments with Spot-On. *ELife*, **2018**, 7,	8.9	104

75	Imaging transcription in living cells. *Annual Review of Biophysics*, **2009**, 38, 173-96	21.1	99
74	Distinct Classes of Chromatin Loops Revealed by Deletion of an RNA-Binding Region in CTCF. *Molecular Cell*, **2019**, 76, 395-411.e13	17.6	97
73	The SNARE Sec22b has a non-fusogenic function in plasma membrane expansion. *Nature Cell Biology*, **2014**, 16, 434-44	23.4	93
72	A Cajal body-specific pseudouridylation guide RNA is composed of two box H/ACA snoRNA-like domains. *Nucleic Acids Research*, **2002**, 30, 4643-9	20.1	90
71	Imaging gene expression in single living cells. *Nature Reviews Molecular Cell Biology*, **2004**, 5, 855-61	48.7	86
70	Dense Bicoid hubs accentuate binding along the morphogen gradient. *Genes and Development*, **2017**, 31, 1784-1794	12.6	84
69	Dynamic multifactor hubs interact transiently with sites of active transcription in embryos. *ELife*, **2018**, 7,	8.9	75
68	Cotranscriptional recognition of human intronic box H/ACA snoRNAs occurs in a splicing-independent manner. *Molecular and Cellular Biology*, **2006**, 26, 2540-9	4.8	60
67	Determining cellular CTCF and cohesin abundances to constrain 3D genome models. *ELife*, **2019**, 8,	8.9	59
66	CTCF sites display cell cycle-dependent dynamics in factor binding and nucleosome positioning. *Genome Research*, **2019**, 29, 236-249	9.7	58
65	A stable mode of bookmarking by TBP recruits RNA polymerase II to mitotic chromosomes. *ELife*, **2018**, 7,	8.9	58
64	Assessing the localization of centrosomal proteins by PALM/STORM nanoscopy. *Cytoskeleton*, **2011** , 68, 619-27	2.4	52
63	Splicing-independent recruitment of U1 snRNP to a transcription unit in living cells. *Journal of Cell Science*, **2010**, 123, 2085-93	5.3	50
62	Guided nuclear exploration increases CTCF target search efficiency. *Nature Chemical Biology*, **2020**, 16, 257-266	11.7	50
61	A new class of disordered elements controls DNA replication through initiator self-assembly. *ELife*, **2019**, 8,	8.9	46
60	Multi-scale tracking reveals scale-dependent chromatin dynamics after DNA damage. *Molecular Biology of the Cell*, **2017**,	3.5	44
59	Dynamics of transcription and mRNA export. *Current Opinion in Cell Biology*, **2005**, 17, 332-9	9	43
58	Geometry of the nucleus: a perspective on gene expression regulation. *Current Opinion in Chemical Biology*, **2014**, 20, 112-9	9.7	42

57	RNA asymmetric distribution and daughter/mother differentiation in yeast. *Current Opinion in Microbiology*, **2003**, 6, 614-20	7.9	41
56	Processing of intron-encoded box C/D small nucleolar RNAs lacking a 5′-terminal stem structure. *Molecular and Cellular Biology*, **2000**, 20, 4522-31	4.8	37
55	Covalent Protein Labeling and Improved Single-Molecule Optical Properties of Aqueous CdSe/CdS Quantum Dots. *ACS Nano*, **2017**, 11, 6773-6781	16.7	36
54	Intra-nuclear mobility and target search mechanisms of transcription factors: a single-molecule perspective on gene expression. *Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms*, **2012**, 1819, 482-93	6	33
53	Protein motion in the nucleus: from anomalous diffusion to weak interactions. *Biochemical Society Transactions*, **2018**, 46, 945-956	5.1	32
52	A dynamic interplay of enhancer elements regulates expression in naïve pluripotency. *Genes and Development*, **2017**, 31, 1795-1808	12.6	31
51	Accessing the third dimension in localization-based super-resolution microscopy. *Physical Chemistry Chemical Physics*, **2014**, 16, 16340-8	3.6	31
50	Multifocus microscopy with precise color multi-phase diffractive optics applied in functional neuronal imaging. *Biomedical Optics Express*, **2016**, 7, 855-69	3.5	30
49	Single cell correlation fractal dimension of chromatin: a framework to interpret 3D single molecule super-resolution. *Nucleus*, **2014**, 5, 75-84	3.9	30
48	Gene expression within a dynamic nuclear landscape. *EMBO Journal*, **2006**, 25, 3469-79	13	30
47	Switch-like Arp2/3 activation upon WASP and WIP recruitment to an apparent threshold level by multivalent linker proteins in vivo. *ELife*, **2017**, 6,	8.9	29
46	Imaging Transcription: Past, Present, and Future. *Cold Spring Harbor Symposia on Quantitative Biology*, **2015**, 80, 1-8	3.9	28
45	Dynamic association and localization of human H/ACA RNP proteins. *Rna*, **2006**, 12, 2057-62	5.8	24
44	Stable assembly of HIV-1 export complexes occurs cotranscriptionally. *Rna*, **2014**, 20, 1-8	5.8	21
43	Cohesin residency determines chromatin loop patterns. *ELife*, **2020**, 9,	8.9	18
42	Single Molecule Imaging in Live Embryos Using Lattice Light-Sheet Microscopy. *Methods in Molecular Biology*, **2018**, 1814, 541-559	1.4	18
41	Single-molecule diffusometry reveals no catalysis-induced diffusion enhancement of alkaline phosphatase as proposed by FCS experiments. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 21328-21335	11.5	16
40	Open-source RNA extraction and RT-qPCR methods for SARS-CoV-2 detection. *PLoS ONE*, **2021**, 16, e0246647	3.7	14

39	High-frequency promoter firing links THO complex function to heavy chromatin formation. *Cell Reports*, **2013**, 5, 1082-94	10.6	13
38	The Histone Chaperone FACT Induces Cas9 Multi-turnover Behavior and Modifies Genome Manipulation in Human Cells. *Molecular Cell*, **2020**, 79, 221-233.e5	17.6	12
37	An RNA-binding region regulates CTCF clustering and chromatin looping		12
36	Evidence for an Integrated Gene Repression Mechanism Based on mRNA Isoform Toggling in Human Cells. *G3: Genes, Genomes, Genetics*, **2019**, 9, 1045-1053	3.2	11
35	Caffeine prevents transcription inhibition and P-TEFb/7SK dissociation following UV-induced DNA damage. *PLoS ONE*, **2010**, 5, e11245	3.7	10
34	The dynamic range of transcription. *Molecular Cell*, **2008**, 30, 545-6	17.6	10
33	Resolving the 3D landscape of transcription-linked mammalian chromatin folding		10
32	Tuning levels of low-complexity domain interactions to modulate endogenous oncogenic transcription.. *Molecular Cell*, **2022**,	17.6	10
31	Master regulators in primary skin fibroblast fate reprogramming in a human ex vivo model of chronic wounds. *Wound Repair and Regeneration*, **2016**, 24, 247-62	3.6	9
30	Enhancer-promoter interactions and transcription are maintained upon acute loss of CTCF, cohesin, WAPL, and YY1		8
29	TRIM8 modulates the EWS/FLI oncoprotein to promote survival in Ewing sarcoma. *Cancer Cell*, **2021** , 39, 1262-1278.e7	24.3	8
28	Faster and less phototoxic 3D fluorescence microscopy using a versatile compressed sensing scheme. *Optics Express*, **2017**, 25, 13668-13683	3.3	7
27	Dual-color 3D PALM/dSTORM imaging of centrosomal proteins using MicAO 3DSR **2013**,		7
26	The transcription factor activity gradient (TAG) model: contemplating a contact-independent mechanism for enhancer-promoter communication.. *Genes and Development*, **2021**,	12.6	7
25	Inexpensive, versatile and open-source methods for SARS-CoV-2 detection		7
24	Short exposure to the DNA intercalator DRAQ5 dislocates the transcription machinery and induces cell death. *Photochemistry and Photobiology*, **2011**, 87, 256-61	3.6	5
23	Guided nuclear exploration increases CTCF target search efficiency		5
22	Simple, Inexpensive RNA Isolation and One-Step RT-qPCR Methods for SARS-CoV-2 Detection and General Use. *Current Protocols*, **2021**, 1, e130		5

21	Transcription activation depends on the length of the RNA polymerase II C-terminal domain. *EMBO Journal*, **2021**, 40, e107015	13	5
20	Role of the DHH1 gene in the regulation of monocarboxylic acids transporters expression in Saccharomyces cerevisiae. *PLoS ONE*, **2014**, 9, e111589	3.7	4
19	Structure of the human SAGA coactivator complex. *Nature Structural and Molecular Biology*, **2021**, 28, 989-996	17.6	4
18	Author response: Single-molecule tracking in live cells reveals distinct target-search strategies of transcription factors in the nucleus **2014**,		4
17	Dynamic and Selective Low-Complexity Domain Interactions Revealed by Live-Cell Single-Molecule Imaging		4
16	Dynamic multifactor hubs interact transiently with sites of active transcription in Drosophila embryos		3
15	A Dynamic Mode of Mitotic Bookmarking by Transcription Factors		3
14	CTCF and Cohesin Regulate Chromatin Loop Stability with Distinct Dynamics		3
13	RNA polymerase II depletion from the inactive X chromosome territory is not mediated by physical compartmentalization		3
12	Recovering mixtures of fast diffusing states from short single particle trajectories		3
11	Structure of the human SAGA coactivator complex: The divergent architecture of human SAGA allows modular coordination of transcription activation and co-transcriptional splicing		3
10	Estimating Cellular Abundances of Halo-tagged Proteins in Live Mammalian Cells by Flow Cytometry. *Bio-protocol*, **2020**, 10, e3527	0.9	2
9	Assessing Self-interaction of Mammalian Nuclear Proteins by Co-immunoprecipitation. *Bio-protocol*, **2020**, 10, e3526	0.9	2
8	Spot-On: robust model-based analysis of single-particle tracking experiments		2
7	Cohesin residency determines chromatin loop patterns		2
6	Transient DNA Binding Induces RNA Polymerase II Compartmentalization During Herpesviral Infection Distinct From Phase Separation		2
5	Dense Bicoid Hubs Accentuate Binding along the Morphogen Gradient		2
4	CTCF sites display cell cycle dependent dynamics in factor binding and nucleosome positioning		1

3	A new class of disordered elements controls DNA replication through initiator self-assembly		1
2	A versatile compressed sensing scheme for faster and less phototoxic 3D fluorescence microscopy		1
1	A Bayesian nonparametric approach to super-resolution single-molecule localization. *Annals of Applied Statistics*, **2021**, 15,	2.1	1