

File checklist

Should you have any questions regarding this checklist, please contact the relevant *Communications* journal.

Files			
Item	Permissible file format	Notes	
Editorial Requests Table	.doc, .docx, .pdf	Please provide a copy of the Editorial Requests Table supplied with our decision letter, with all changes made in response to our requests detailed in the right-hand column.	
Cover letter	.doc, .docx, .pdf	Outline any additional changes to the manuscript, note whether you prefer to opt-in or opt-out of transparent peer review, edit or approve the editor summary, and include the title and captions for any supplementary items not included in the main supplementary PDF, such as Supplementary Movies, Supplementary Data, etc. If you would like us to mention authors, institutions or lab groups when promoting your manuscript on Twitter, please provide the relevant twitter handles.	
Author responses	.doc, .docx, .pdf	Provide your point-by-point response to any issues raised by our reviewers (please include the reviewers' comments in this document).	
Article File	.doc, .docx, .tex	Main manuscript file must be in Microsoft Word or LaTeX format. Select the file type 'Article' when submitting. Do not use the 'revised manuscript - marked up' file type. LaTeX article files must be accompanied by a .pdf, and the bibliography must be either provided separately or contained within the .tex file.	
Main Figure File(s)	.pdf, .eps, .tiff, .psd, .ai, .png, .pptx	Figures must be provided as separate files at a minimum resolution of 300 dpi at final size. Figures appear at 9 or 18 cm width (1 or 2 columns respectively). Figures must be in file type .psd, .ai, .eps, .tiff, .jpg, .pdf, .ps, .gif, .ppt, .pptx, .png, .bmp, .vsd, .cdx, .svg or .emf. We recommend using vectographic formats as these lead to higher resolution figures. Any chemical structures contained within figures should be supplied as separate ChemDraw (.cdx) files. Figures must be supplied whole, with all panels included in a single document. We strongly discourage the use or adaptation of previously published images (including figures from the literature, stock photos, clip art or commercial satellite and map data), but if this is unavoidable, you must request the necessary rights documentation to re-use such material from the relevant copyright holders and submit this to us alongside your manuscript. An appropriate permissions statement must be present in the relative figure caption for any third-party images. If individuals are identifiable in images, their written permission must be provided.	
Main Table(s)	Word, TeX	Included in the Article File in word-editable format.	
Boxes (Reviews & Perspectives only)	Word, TeX,	Included in the Article File in word-editable format, or uploaded as a separate Word or TeX file under the file type 'Article'.	

Supplementary Information	.txt, .gif, .html, .doc, .jpg, .swf, .mov, .xlsx, .pdf, .ppt, .wav, .csv, .zip	<p>Any Supplementary Figures, Tables, Methods, Notes, Discussion and References must be provided in a single separate file in PDF format.</p> <p>Any Supplementary Movie/Audio/Data/Software files should be supplied separately and should be labelled as Supplementary Movie/Audio/Data/Software 1, etc. Legends for these should be given in the cover letter (not in the main Supplementary Information file).</p> <p>Large Supplementary tables should instead be provided as Excel or text files and labelled as Supplementary Data.</p> <p>Supplementary Software must be supplied as a ZIP file.</p> <p>We recommend limiting the size of each Supplementary file to 50MB.</p> <p>** Please note that Supplementary Information cannot be changed after the paper has been accepted **</p>	
Life sciences reporting summary	.pdf	For life science manuscripts, a final version of the life sciences reporting summary. Be sure to include your name and the date in the top right corner. https://www.nature.com/documents/nr-reporting-summary.pdf	
Solar cells reporting summary	.pdf	For solar cell manuscripts, a final version of the solar cells reporting summary. https://www.nature.com/documents/nr-photovoltaic-reporting.pdf	
Lasing reporting summary	.pdf	For lasing manuscripts, a final version of the lasing reporting summary. https://www.nature.com/documents/nr-lasing-reporting.pdf	
Editorial policy checklist	.pdf	For all primary research articles, a final version of the editorial policy checklist. Please note that this form is a dynamic 'smart pdf' and must therefore be downloaded and completed in Adobe Reader. Clicking this link will download a zip file containing the pdf. https://www.nature.com/documents/nr-editorial-policy-checklist.zip	
Suggested feature image	.jpg, .pdf, .gif, .tiff, .psd	If you wish, an interesting image (but not an illustration or schematic) for consideration as a 'Featured Image' on the journal homepage. The file should be 1400x400 pixels in RGB format and should be uploaded as 'Related Manuscript File'. In addition to our home page, we may also use this image (with credit) in other journal-specific promotional material. If you submit a suggested featured image, please also include a completed image License to Publish form .	