

# Package ‘ggsci’

June 18, 2024

**Type** Package

**Title** Scientific Journal and Sci-Fi Themed Color Palettes for 'ggplot2'

**Version** 3.2.0

**Maintainer** Nan Xiao <me@nanx.me>

**Description** A collection of 'ggplot2' color palettes inspired by plots in scientific journals, data visualization libraries, science fiction movies, and TV shows.

**License** GPL (>= 3)

**URL** <https://nanx.me/ggsci/>, <https://github.com/nanxstats/ggsci>

**BugReports** <https://github.com/nanxstats/ggsci/issues>

**Depends** R (>= 3.5.0)

**Imports** ggplot2 (>= 2.0.0), grDevices, scales

**Suggests** gridExtra, knitr, ragg, rmarkdown

**VignetteBuilder** knitr

**Encoding** UTF-8

**RoxygenNote** 7.3.1

**NeedsCompilation** no

**Author** Nan Xiao [aut, cre] (<<https://orcid.org/0000-0002-0250-5673>>),  
Joshua Cook [ctb],  
Clara Jégousse [ctb],  
Hui Chen [ctb],  
Miaozhu Li [ctb]

**Repository** CRAN

**Date/Publication** 2024-06-18 00:20:02 UTC

## Contents

pal_aaas . . . . .	3
pal_bmj . . . . .	4
pal_bs5 . . . . .	4
pal_cosmic . . . . .	5
pal_d3 . . . . .	6
pal_flatui . . . . .	7
pal_frontiers . . . . .	8
pal_futurama . . . . .	8
pal_gsea . . . . .	9
pal_igv . . . . .	10
pal_jama . . . . .	10
pal_jco . . . . .	11
pal_lancet . . . . .	12
pal_locuszoom . . . . .	12
pal_material . . . . .	13
pal_nejm . . . . .	14
pal_npg . . . . .	15
pal_observable . . . . .	15
pal_rickandmorty . . . . .	16
pal_simpsons . . . . .	17
pal_startrek . . . . .	17
pal_tron . . . . .	18
pal_tw3 . . . . .	19
pal_uchicago . . . . .	20
pal_ucscgb . . . . .	21
rgb_bs5 . . . . .	21
rgb_gsea . . . . .	23
rgb_material . . . . .	23
rgb_tw3 . . . . .	25
scale_color_aaas . . . . .	26
scale_color_bmj . . . . .	27
scale_color_bs5 . . . . .	28
scale_color_cosmic . . . . .	30
scale_color_d3 . . . . .	31
scale_color_flatui . . . . .	33
scale_color_frontiers . . . . .	34
scale_color_futurama . . . . .	35
scale_color_gsea . . . . .	36
scale_color_igv . . . . .	37
scale_color_jama . . . . .	39
scale_color_jco . . . . .	40
scale_color_lancet . . . . .	41
scale_color_locuszoom . . . . .	42
scale_color_material . . . . .	43
scale_color_nejm . . . . .	45
scale_color_npg . . . . .	46

<i>pal_aaas</i>	3
scale_color_observable . . . . .	47
scale_color_rickandmorty . . . . .	48
scale_color_simpsons . . . . .	49
scale_color_startrek . . . . .	50
scale_color_tron . . . . .	51
scale_color_tw3 . . . . .	52
scale_color_uchicago . . . . .	54
scale_color_ucscgb . . . . .	55
<b>Index</b>	<b>57</b>

---

<i>pal_aaas</i>	<i>AAAS journal color palettes</i>
-----------------	------------------------------------

---

## Description

Color palettes inspired by plots in journals published by American Association for the Advancement of Science (AAAS), such as *Science* and *Science Translational Medicine*.

## Usage

```
pal_aaas(palette = c("default"), alpha = 1)
```

## Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette inspired by <i>Science</i> ).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## Examples

```
library("scales")
show_col(pal_aaas("default")(10))
show_col(pal_aaas("default", alpha = 0.6)(10))
```

---

pal\_bmj *BMJ color palettes*

---

### Description

Color palette from the BMJ living style guide.

### Usage

```
pal_bmj(palette = c("default"), alpha = 1)
```

### Arguments

palette	Palette type. Currently there is one available option: "default" (9-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

### Author(s)

Hui Chen | <huichen@zju.edu.cn>

### References

<https://technology.bmj.com/living-style-guide/colour.html>

### Examples

```
library("scales")
show_col(pal_bmj("default")(9))
show_col(pal_bmj("default", alpha = 0.6)(9))
```

---

pal\_bs5 *Bootstrap 5 color palettes*

---

### Description

Bootstrap 5 color palettes.

### Usage

```
pal_bs5(
  palette = c("blue", "indigo", "purple", "pink", "red", "orange", "yellow", "green",
             "teal", "cyan", "gray"),
  n = 10,
  alpha = 1,
  reverse = FALSE
)
```

**Arguments**

palette	Palette type. There are 11 available options: <ul style="list-style-type: none"><li>• "blue"</li><li>• "indigo"</li><li>• "purple"</li><li>• "pink"</li><li>• "red"</li><li>• "orange"</li><li>• "yellow"</li><li>• "green"</li><li>• "teal"</li><li>• "cyan"</li><li>• "gray"</li></ul>
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_bs5("indigo")(10))
show_col(pal_bs5("indigo", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

pal\_cosmic

*COSMIC color palettes*

---

**Description**

Color palettes inspired by the colors used in projects from the [Catalogue Of Somatic Mutations in Cancers \(COSMIC\)](#).

**Usage**

```
pal_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1
)
```

**Arguments**

palette	<p>Palette type. Currently there are three available options:</p> <ul style="list-style-type: none"> <li>• "signature_substitutions" (6-color palette).</li> <li>• "hallmarks_light" (10-color palette).</li> <li>• "hallmarks_dark" (10-color palette).</li> </ul> <p>The "hallmarks_light" option is from <a href="#">Hanahan and Weinberg (2011)</a>.</p>
alpha	<p>Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.</p>

**Author(s)**

Joshua H. Cook | <joshuacook0023@gmail.com> | [@jhrcook](#)

**Examples**

```
library("scales")
show_col(pal_cosmic("hallmarks_light")(10))
show_col(pal_cosmic("hallmarks_light", alpha = 0.6)(10))
show_col(pal_cosmic("hallmarks_dark")(10))
show_col(pal_cosmic("hallmarks_dark", alpha = 0.6)(10))
show_col(pal_cosmic("signature_substitutions")(6))
show_col(pal_cosmic("signature_substitutions", alpha = 0.6)(6))
```

---

pal\_d3

*D3.js color palettes*

---

**Description**

Color palettes based on the colors used by D3.js.

**Usage**

```
pal_d3(
  palette = c("category10", "category20", "category20b", "category20c"),
  alpha = 1
)
```

**Arguments**

palette	<p>Palette type. There are four available options:</p> <ul style="list-style-type: none"> <li>• "category10" (10-color palette).</li> <li>• "category20" (20-color palette).</li> <li>• "category20b" (20-color palette).</li> <li>• "category20c" (20-color palette).</li> </ul>
alpha	<p>Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.</p>

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**References**

<https://github.com/d3/d3-3.x-api-reference/blob/master/Ordinal-Scales.md>

**Examples**

```
library("scales")
show_col(pal_d3("category10")(10))
show_col(pal_d3("category20")(20))
show_col(pal_d3("category20b")(20))
show_col(pal_d3("category20c")(20))
```

---

pal\_flatui

*Flat UI color palettes*

---

**Description**

Color palettes inspired by the Flat UI colors.

**Usage**

```
pal_flatui(palette = c("default", "flattastic", "aussie"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there are three available options: <ul style="list-style-type: none"><li>• "default" (10-color palette).</li><li>• "flattastic" (12-color palette).</li><li>• "aussie" (10-color palette).</li></ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.

**Author(s)**

Clara Jégousse | <cat3@hi.is>

**Examples**

```
library("scales")
show_col(pal_flatui("default")(10))
show_col(pal_flatui("flattastic")(12))
show_col(pal_flatui("aussie")(10))
show_col(pal_flatui("aussie", alpha = 0.6)(10))
```

---

pal\_frontiers      *Frontiers journal color palettes*

---

### Description

Color palettes inspired by the colors used in *Frontiers* journals.

### Usage

```
pal_frontiers(palette = c("default"), alpha = 1)
```

### Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.

### Author(s)

Clara Jégousse | <cat3@hi.is>

### Examples

```
library("scales")
show_col(pal_frontiers("default")(7))
show_col(pal_frontiers("default", alpha = 0.6)(7))
```

---

pal\_futurama      *Futurama color palettes*

---

### Description

Color palettes inspired by the colors used in *Futurama*.

### Usage

```
pal_futurama(palette = c("planetexpress"), alpha = 1)
```

### Arguments

palette	Palette type. Currently there is one available option: "planetexpress" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.



**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_futurama("planetexpress")(12))
show_col(pal_futurama("planetexpress", alpha = 0.6)(12))
```

---

pal\_gsea

*The GSEA GenePattern color palettes*

---

**Description**

Color palette inspired by the colors used in the heatmaps plotted by GSEA GenePattern.

**Usage**

```
pal_gsea(palette = c("default"), n = 12, alpha = 1, reverse = FALSE)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (continuous palette with 12 base colors).
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
reverse	Logical. Should the order of the colors be reversed?

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_gsea("default")(12))
show_col(pal_gsea("default", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

pal\_igv                      *Integrative Genomics Viewer (IGV) color palettes*

---

**Description**

Color palettes based on the colors used by Integrative Genomics Viewer (IGV).

**Usage**

```
pal_igv(palette = c("default", "alternating"), alpha = 1)
```

**Arguments**

palette	Palette type. There are two available options: <ul style="list-style-type: none"><li>• "default" (51-color palette).</li><li>• "alternating" (2-color palette).</li></ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**References**

James T. Robinson, Helga Thorvaldsdóttir, Wendy Winckler, Mitchell Guttman, Eric S. Lander, Gad Getz, Jill P. Mesirov. Integrative Genomics Viewer. *Nature Biotechnology* 29, 24–26 (2011).

**Examples**

```
library("scales")
show_col(pal_igv("default")(51))
show_col(pal_igv("alternating")(2))
```

---

pal\_jama                      *Journal of the American Medical Association color palettes*

---

**Description**

Color palette inspired by plots in *The Journal of the American Medical Association*.

**Usage**

```
pal_jama(palette = c("default"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_jama("default")(7))
show_col(pal_jama("default", alpha = 0.6)(7))
```

---

pal\_jco

*Journal of Clinical Oncology color palettes*

---

**Description**

Color palette inspired by plots in *Journal of Clinical Oncology*.

**Usage**

```
pal_jco(palette = c("default"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_jco("default")(10))
show_col(pal_jco("default", alpha = 0.6)(10))
```

---

pal_lancet	<i>Lancet journal color palettes</i>
------------	--------------------------------------

---

**Description**

Color palettes inspired by plots in Lancet journals, such as *Lancet Oncology*.

**Usage**

```
pal_lancet(palette = c("lanonc"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "lanonc" (9-color palette inspired by <i>Lancet Oncology</i> ).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_lancet("lanonc")(9))
show_col(pal_lancet("lanonc", alpha = 0.6)(9))
```

---

pal_locuszoom	<i>LocusZoom color palette</i>
---------------	--------------------------------

---

**Description**

Color palettes based on the colors used by LocusZoom.

**Usage**

```
pal_locuszoom(palette = c("default"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**References**

Pruim, Randall J., et al. (2010). LocusZoom: regional visualization of genome-wide association scan results. *Bioinformatics*, 26(18), 2336–2337.

**Examples**

```
library("scales")
show_col(pal_locuszoom("default")(7))
show_col(pal_locuszoom("default", alpha = 0.6)(7))
```

---

pal_material	<i>Material Design color palettes</i>
--------------	---------------------------------------

---

**Description**

Material Design 2 color palettes.

**Usage**

```
pal_material(
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",
    "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",
    "deep-orange", "brown", "grey", "blue-grey"),
  n = 10,
  alpha = 1,
  reverse = FALSE
)
```

**Arguments**

palette      Palette type. There are 19 available options:

- "red"
- "pink"
- "purple"
- "deep-purple"
- "indigo"
- "blue"
- "light-blue"
- "cyan"
- "teal"
- "green"

	<ul style="list-style-type: none"> <li>• "light-green"</li> <li>• "lime"</li> <li>• "yellow"</li> <li>• "amber"</li> <li>• "orange"</li> <li>• "deep-orange"</li> <li>• "brown"</li> <li>• "grey"</li> <li>• "blue-grey"</li> </ul>
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_material("indigo")(10))
show_col(pal_material("indigo", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

pal\_nejm

*NEJM color palettes*

---

**Description**

Color palette inspired by plots in *The New England Journal of Medicine*.

**Usage**

```
pal_nejm(palette = c("default"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (8-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_nejm("default")(8))
show_col(pal_nejm("default", alpha = 0.6)(8))
```

---

pal_npg	<i>NPG journal color palettes</i>
---------	-----------------------------------

---

**Description**

Color palettes inspired by plots in journals published by Nature Publishing Group, such as *Nature Reviews Cancer*.

**Usage**

```
pal_npg(palette = c("nrc"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "nrc" (10-color palette inspired by <i>Nature Reviews Cancer</i> ).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_npg("nrc")(10))
show_col(pal_npg("nrc", alpha = 0.6)(10))
```

---

pal_observable	<i>Observable 10 color palette</i>
----------------	------------------------------------

---

**Description**

The Observable 10 palette.

**Usage**

```
pal_observable(palette = c("observable10"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "observable10" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**References**

Pettiross J (2023). "Crafting data colors and staying on brand." *Observable blog*. <https://observablehq.com/blog/crafting-data-colors>

**Examples**

```
library("scales")
show_col(pal_observable("observable10")(10))
show_col(pal_observable("observable10", alpha = 0.6)(10))
```

---

pal\_rickandmorty      *Rick and Morty color palettes*

---

**Description**

Color palettes inspired by the colors used in *Rick and Morty*.

**Usage**

```
pal_rickandmorty(palette = c("schwifty"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "schwifty" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_rickandmorty("schwifty")(12))
show_col(pal_rickandmorty("schwifty", alpha = 0.6)(12))
```



---

pal\_simpsons            *The Simpsons color palettes*

---

**Description**

Color palettes inspired by the colors used in *The Simpsons*.

**Usage**

```
pal_simpsons(palette = c("springfield"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "springfield" (16-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_simpsons("springfield")(16))
show_col(pal_simpsons("springfield", alpha = 0.6)(16))
```

---

pal\_startrek            *Star Trek color palettes*

---

**Description**

Color palettes inspired by the colors used in *Star Trek*.

**Usage**

```
pal_startrek(palette = c("uniform"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "uniform" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_startrek("uniform")(7))
show_col(pal_startrek("uniform", alpha = 0.6)(7))
```

---

pal\_tron

*Tron Legacy color palettes*

---

**Description**

Color palettes inspired by the colors used in *Tron Legacy*.

**Usage**

```
pal_tron(palette = c("legacy"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "legacy" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See <code>alpha</code> in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_tron("legacy")(7))
show_col(pal_tron("legacy", alpha = 0.6)(7))
```

---

pal\_tw3

*Tailwind CSS color palettes*

---

## Description

Tailwind CSS color palettes.

## Usage

```
pal_tw3(  
  palette = c("slate", "gray", "zinc", "neutral", "stone", "red", "orange", "amber",  
    "yellow", "lime", "green", "emerald", "teal", "cyan", "sky", "blue", "indigo",  
    "violet", "purple", "fuchsia", "pink", "rose"),  
  n = 10,  
  alpha = 1,  
  reverse = FALSE  
)
```

## Arguments

palette      Palette type. There are 22 available options:

- "slate"
- "gray"
- "zinc"
- "neutral"
- "stone"
- "red"
- "orange"
- "amber"
- "yellow"
- "lime"
- "green"
- "emerald"
- "teal"
- "cyan"
- "sky"
- "blue"
- "indigo"
- "violet"
- "purple"
- "fuchsia"
- "pink"
- "rose"

n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_tw3("rose")(10))
show_col(pal_tw3("rose", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

pal\_uchicago

*The University of Chicago color palettes*

---

**Description**

Color palettes based on the colors used by the University of Chicago.

**Usage**

```
pal_uchicago(palette = c("default", "light", "dark"), alpha = 1)
```

**Arguments**

palette	Palette type. There are three available options: <ul style="list-style-type: none"><li>• "default" (9-color palette);</li><li>• "light" (9-color light palette);</li><li>• "dark" (9-color dark palette).</li></ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**References**

[https://news.uchicago.edu/sites/default/files/attachments/\\_uchicago.identity.guidelines.pdf](https://news.uchicago.edu/sites/default/files/attachments/_uchicago.identity.guidelines.pdf)

**Examples**

```
library("scales")
show_col(pal_uchicago("default")(9))
show_col(pal_uchicago("light")(9))
show_col(pal_uchicago("dark")(9))
```

---

pal\_ucscgb

*UCSC Genome Browser color palette*

---

**Description**

Color palette from UCSC Genome Browser chromosome colors.

**Usage**

```
pal_ucscgb(palette = c("default"), alpha = 1)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (26-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("scales")
show_col(pal_ucscgb("default")(26))
show_col(pal_ucscgb("default", alpha = 0.6)(26))
```

---

rgb\_bs5

*Bootstrap 5 color palettes*

---

**Description**

Bootstrap 5 color palettes.

## Usage

```
rgb_bs5(  
  palette = c("blue", "indigo", "purple", "pink", "red", "orange", "yellow", "green",  
             "teal", "cyan", "gray"),  
  n = 10,  
  alpha = 1,  
  reverse = FALSE  
)
```

## Arguments

palette	Palette type. There are 11 available options: <ul style="list-style-type: none"><li>• "blue"</li><li>• "indigo"</li><li>• "purple"</li><li>• "pink"</li><li>• "red"</li><li>• "orange"</li><li>• "yellow"</li><li>• "green"</li><li>• "teal"</li><li>• "cyan"</li><li>• "gray"</li></ul>
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
reverse	Logical. Should the order of the colors be reversed?

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## References

<https://getbootstrap.com/docs/5.3/customize/color/#all-colors>

## Examples

```
library("scales")  
show_col(pal_bs5("indigo")(10))  
show_col(pal_bs5("indigo", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

rgb\_gsea                      *The GSEA GenePattern color palettes*

---

### Description

Color palette inspired by the colors used in the heatmaps plotted by GSEA GenePattern.

### Usage

```
rgb_gsea(palette = c("default"), n = 12, alpha = 1, reverse = FALSE)
```

### Arguments

palette	Palette type. Currently there is one available option: "default" (continuous palette with 12 base colors).
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?

### Note

The 12 base colors used in this palette are derived from the [HeatMapImage documentation](#).

### Author(s)

Nan Xiao | <me@nanx.me> | <https://nanx.me>

### Examples

```
library("scales")
show_col(pal_gsea("default")(12))
show_col(pal_gsea("default", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

rgb\_material                      *Material Design color palettes*

---

### Description

Material Design 2 color palettes.

**Usage**

```
rgb_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  n = 10,  
  alpha = 1,  
  reverse = FALSE  
)
```

**Arguments**

palette	Palette type. There are 19 available options: <ul style="list-style-type: none"><li>• "red"</li><li>• "pink"</li><li>• "purple"</li><li>• "deep-purple"</li><li>• "indigo"</li><li>• "blue"</li><li>• "light-blue"</li><li>• "cyan"</li><li>• "teal"</li><li>• "green"</li><li>• "light-green"</li><li>• "lime"</li><li>• "yellow"</li><li>• "amber"</li><li>• "orange"</li><li>• "deep-orange"</li><li>• "brown"</li><li>• "grey"</li><li>• "blue-grey"</li></ul>
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
reverse	Logical. Should the order of the colors be reversed?

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**References**

<https://m2.material.io/design/color/the-color-system.html>



## Examples

```
library("scales")
show_col(pal_material("indigo")(10))
show_col(pal_material("indigo", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

rgb\_tw3

*Tailwind CSS color palettes*

---

## Description

Tailwind CSS color palettes.

## Usage

```
rgb_tw3(
  palette = c("slate", "gray", "zinc", "neutral", "stone", "red", "orange", "amber",
    "yellow", "lime", "green", "emerald", "teal", "cyan", "sky", "blue", "indigo",
    "violet", "purple", "fuchsia", "pink", "rose"),
  n = 10,
  alpha = 1,
  reverse = FALSE
)
```

## Arguments

palette      Palette type. There are 22 available options:

- "slate"
- "gray"
- "zinc"
- "neutral"
- "stone"
- "red"
- "orange"
- "amber"
- "yellow"
- "lime"
- "green"
- "emerald"
- "teal"
- "cyan"
- "sky"
- "blue"
- "indigo"
- "violet"

	<ul style="list-style-type: none"> <li>• "purple"</li> <li>• "fuchsia"</li> <li>• "pink"</li> <li>• "rose"</li> </ul>
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**References**

<https://tailwindcss.com/docs/customizing-colors>

**Examples**

```
library("scales")
show_col(pal_tw3("rose")(10))
show_col(pal_tw3("rose", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

---

scale\_color\_aaas      *AAAS journal color scales*

---

**Description**

See `pal_aaas()` for details.

**Usage**

```
scale_color_aaas(palette = c("default"), alpha = 1, ...)
scale_colour_aaas(palette = c("default"), alpha = 1, ...)
scale_fill_aaas(palette = c("default"), alpha = 1, ...)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (10-color palette inspired by <i>Science</i> ).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_aaas()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_aaas()
```

---

scale\_color\_bmj

*BMJ color scales*

---

**Description**

See [pal\\_bmj\(\)](#) for details.

**Usage**

```
scale_color_bmj(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_bmj(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_bmj(palette = c("default"), alpha = 1, ...)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (9-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

**Author(s)**

Hui Chen | <huichen@zju.edu.cn>

**References**

<https://technology.bmj.com/living-style-guide/colour.html>

**Examples**

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_bmj()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_bmj()
```

---

scale\_color\_bs5

*Bootstrap 5 color scales*

---

**Description**

See [pal\\_bs5\(\)](#) for details.

**Usage**

```
scale_color_bs5(
  palette = c("blue", "indigo", "purple", "pink", "red", "orange", "yellow", "green",
             "teal", "cyan", "gray"),
  alpha = 1,
  reverse = FALSE,
  ...
)

scale_colour_bs5(
  palette = c("blue", "indigo", "purple", "pink", "red", "orange", "yellow", "green",
```

```

    "teal", "cyan", "gray"),
  alpha = 1,
  reverse = FALSE,
  ...
)

scale_fill_bs5(
  palette = c("blue", "indigo", "purple", "pink", "red", "orange", "yellow", "green",
    "teal", "cyan", "gray"),
  alpha = 1,
  reverse = FALSE,
  ...
)

```

### Arguments

palette	Palette type. There are 11 available options: <ul style="list-style-type: none"> <li>• "blue"</li> <li>• "indigo"</li> <li>• "purple"</li> <li>• "pink"</li> <li>• "red"</li> <li>• "orange"</li> <li>• "yellow"</li> <li>• "green"</li> <li>• "teal"</li> <li>• "cyan"</li> <li>• "gray"</li> </ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
reverse	Logical. Should the order of the colors be reversed?
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```

library("ggplot2")

data("mtcars")
cor <- abs(cor(mtcars))
cor_melt <- data.frame(
  Var1 = rep(seq_len(nrow(cor)), times = ncol(cor)),
  Var2 = rep(seq_len(ncol(cor)), each = nrow(cor)),
  value = as.vector(cor)
)

```

```

)

ggplot(
  cor_melt,
  aes(x = Var1, y = Var2, fill = value)
) +
  geom_tile(colour = "black", size = 0.3) +
  theme_bw() +
  scale_fill_bs5("teal")

```

---

scale\_color\_cosmic      *COSMIC color scales*

---

### Description

See [pal\\_cosmic\(\)](#) for details.

### Usage

```

scale_color_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1,
  ...
)

scale_colour_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1,
  ...
)

scale_fill_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1,
  ...
)

```

### Arguments

palette	Palette type. Currently there are three available options: <ul style="list-style-type: none"> <li>"signature_substitutions" (6-color palette).</li> <li>"hallmarks_light" (10-color palette).</li> <li>"hallmarks_dark" (10-color palette).</li> </ul> The "hallmarks_light" option is from <a href="#">Hanahan and Weinberg (2011)</a> .
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

**Author(s)**

Joshua H. Cook | <joshuacook0023@gmail.com> | @jhrcook

**Examples**

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_cosmic()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_cosmic()
```

---

scale\_color\_d3

*D3.js color scales*

---

**Description**

See [pal\\_d3\(\)](#) for details.

**Usage**

```
scale_color_d3(
  palette = c("category10", "category20", "category20b", "category20c"),
  alpha = 1,
  ...
)

scale_colour_d3(
  palette = c("category10", "category20", "category20b", "category20c"),
  alpha = 1,
  ...
)

scale_fill_d3(
  palette = c("category10", "category20", "category20b", "category20c"),
```

```

    alpha = 1,
    ...
  )

```

### Arguments

palette	Palette type. There are four available options: <ul style="list-style-type: none"> <li>• "category10" (10-color palette).</li> <li>• "category20" (20-color palette).</li> <li>• "category20b" (20-color palette).</li> <li>• "category20c" (20-color palette).</li> </ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### References

<https://github.com/d3/d3-3.x-api-reference/blob/master/Ordinal-Scales.md>

### Examples

```

library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_d3()
p2 + scale_fill_d3()

p1 + scale_color_d3(palette = "category20")
p2 + scale_fill_d3(palette = "category20")

p1 + scale_color_d3(palette = "category20b")

```



```
p2 + scale_fill_d3(palette = "category20b")  
  
p1 + scale_color_d3(palette = "category20c")  
p2 + scale_fill_d3(palette = "category20c")
```

---

scale\_color\_flatui      *Flat UI color scales*

---

## Description

See [pal\\_flatui\(\)](#) for details.

## Usage

```
scale_color_flatui(  
  palette = c("default", "flattastic", "aussie"),  
  alpha = 1,  
  ...  
)  
  
scale_colour_flatui(  
  palette = c("default", "flattastic", "aussie"),  
  alpha = 1,  
  ...  
)  
  
scale_fill_flatui(  
  palette = c("default", "flattastic", "aussie"),  
  alpha = 1,  
  ...  
)
```

## Arguments

palette	Palette type. Currently there are three available options: <ul style="list-style-type: none"><li>• "default" (10-color palette).</li><li>• "flattastic" (12-color palette).</li><li>• "aussie" (10-color palette).</li></ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

## Author(s)

Clara Jégousse | <cat3@hi.is>

**Examples**

```
library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_flatui()
p2 + scale_fill_flatui()

p1 + scale_color_flatui(palette = "default")
p2 + scale_fill_flatui(palette = "default")

p1 + scale_color_flatui(palette = "flattastic")
p2 + scale_fill_flatui(palette = "flattastic")

p1 + scale_color_flatui(palette = "aussie")
p2 + scale_fill_flatui(palette = "aussie")
```

---

scale\_color\_frontiers *Frontiers journal color scales*

---

**Description**

See [pal\\_frontiers\(\)](#) for details.

**Usage**

```
scale_color_frontiers(palette = c("default"), alpha = 1, ...)
scale_colour_frontiers(palette = c("default"), alpha = 1, ...)
scale_fill_frontiers(palette = c("default"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

### Author(s)

Clara Jégousse | [cat3@hi.is](mailto:cat3@hi.is)

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_dark() +
  theme(
    panel.background = element_rect(fill = "#2D2D2D"),
    legend.key = element_rect(fill = "#2D2D2D")
  ) +
  scale_color_frontiers()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_dark() +
  theme(
    panel.background = element_rect(fill = "#2D2D2D")
  ) +
  scale_fill_frontiers()
```

---

scale\_color\_futurama *Futurama color scales*

---

### Description

See [pal\\_futurama\(\)](#) for details.

**Usage**

```
scale_color_futurama(palette = c("planetexpress"), alpha = 1, ...)
```

```
scale_colour_futurama(palette = c("planetexpress"), alpha = 1, ...)
```

```
scale_fill_futurama(palette = c("planetexpress"), alpha = 1, ...)
```

**Arguments**

palette	Palette type. Currently there is one available option: "planetexpress" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_futurama()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_futurama()
```

---

scale\_color\_gsea

*The GSEA GenePattern color scales*

---

**Description**

See `pal_gsea()` for details.

**Usage**

```
scale_color_gsea(palette = c("default"), alpha = 1, reverse = FALSE, ...)
scale_colour_gsea(palette = c("default"), alpha = 1, reverse = FALSE, ...)
scale_fill_gsea(palette = c("default"), alpha = 1, reverse = FALSE, ...)
```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (continuous palette with 12 base colors).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("ggplot2")

data("mtcars")
cor <- cor(mtcars)
cor_melt <- data.frame(
  Var1 = rep(seq_len(nrow(cor)), times = ncol(cor)),
  Var2 = rep(seq_len(ncol(cor)), each = nrow(cor)),
  value = as.vector(cor)
)

ggplot(
  cor_melt,
  aes(x = Var1, y = Var2, fill = value)
) +
  geom_tile(colour = "black", size = 0.3) +
  theme_bw() +
  scale_fill_gsea()
```

**Description**

See `pal_igv()` for details.

**Usage**

```
scale_color_igv(palette = c("default", "alternating"), alpha = 1, ...)
scale_colour_igv(palette = c("default", "alternating"), alpha = 1, ...)
scale_fill_igv(palette = c("default", "alternating"), alpha = 1, ...)
```

**Arguments**

palette	Palette type. There are two available options: <ul style="list-style-type: none"> <li>• "default" (51-color palette).</li> <li>• "alternating" (2-color palette).</li> </ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

**Author(s)**

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

**Examples**

```
library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_igv()
p2 + scale_fill_igv()

p1 + scale_colour_manual(
  values = rep(pal_igv("alternating")(2), times = 3)
)
p2 + scale_fill_manual(
  values = rep(pal_igv("alternating")(2), times = 3)
)
```

---

scale\_color\_jama      *Journal of the American Medical Association color scales*

---

## Description

See `pal_jama()` for details.

## Usage

```
scale_color_jama(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_jama(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_jama(palette = c("default"), alpha = 1, ...)
```

## Arguments

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_jama()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_jama()
```

---

scale\_color\_jco      *Journal of Clinical Oncology color scales*

---

### Description

See `pal_jco()` for details.

### Usage

```
scale_color_jco(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_jco(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_jco(palette = c("default"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_jco()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_jco()
```



---

scale\_color\_lancet      *Lancet journal color scales*

---

### Description

See `pal_lancet()` for details.

### Usage

```
scale_color_lancet(palette = c("lanonc"), alpha = 1, ...)
```

```
scale_colour_lancet(palette = c("lanonc"), alpha = 1, ...)
```

```
scale_fill_lancet(palette = c("lanonc"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "lanonc" (9-color palette inspired by <i>Lancet Oncology</i> ).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | <me@nanx.me> | <https://nanx.me>

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_lancet()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_lancet()
```

---

scale\_color\_locuszoom *LocusZoom color scales*

---

### Description

See `pal_locuszoom()` for details.

### Usage

```
scale_color_locuszoom(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_locuszoom(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_locuszoom(palette = c("default"), alpha = 1, ...)
```

### Arguments

<code>palette</code>	Palette type. Currently there is one available option: "default" (7-color palette).
<code>alpha</code>	Transparency level, a real number in (0, 1]. See <code>alpha</code> in <code>grDevices::rgb()</code> for details.
<code>...</code>	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | <me@nanx.me> | <https://nanx.me>

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_locuszoom()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_locuszoom()
```

---

scale\_color\_material *Material Design color scales*

---

## Description

See `pal_material()` for details.

## Usage

```
scale_color_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  alpha = 1,  
  reverse = FALSE,  
  ...  
)  
  
scale_colour_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  alpha = 1,  
  reverse = FALSE,  
  ...  
)  
  
scale_fill_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  alpha = 1,  
  reverse = FALSE,  
  ...  
)
```

## Arguments

`palette` Palette type. There are 19 available options:

- "red"
- "pink"
- "purple"
- "deep-purple"
- "indigo"
- "blue"
- "light-blue"

- "cyan"
- "teal"
- "green"
- "light-green"
- "lime"
- "yellow"
- "amber"
- "orange"
- "deep-orange"
- "brown"
- "grey"
- "blue-grey"

alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | <me@nanx.me> | <https://nanx.me>

### Examples

```
library("ggplot2")

data("mtcars")
cor <- abs(cor(mtcars))
cor_melt <- data.frame(
  Var1 = rep(seq_len(nrow(cor)), times = ncol(cor)),
  Var2 = rep(seq_len(ncol(cor)), each = nrow(cor)),
  value = as.vector(cor)
)

ggplot(
  cor_melt,
  aes(x = Var1, y = Var2, fill = value)
) +
  geom_tile(colour = "black", size = 0.3) +
  theme_bw() +
  scale_fill_material("blue-grey")
```

---

scale\_color\_nejm      *NEJM color scales*

---

## Description

See `pal_nejm()` for details.

## Usage

```
scale_color_nejm(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_nejm(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_nejm(palette = c("default"), alpha = 1, ...)
```

## Arguments

palette	Palette type. Currently there is one available option: "default" (8-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_nejm()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_nejm()
```

---

scale\_color\_npg      *NPG journal color scales*

---

### Description

See `pal_npg()` for details.

### Usage

```
scale_color_npg(palette = c("nrc"), alpha = 1, ...)
```

```
scale_colour_npg(palette = c("nrc"), alpha = 1, ...)
```

```
scale_fill_npg(palette = c("nrc"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "nrc" (10-color palette inspired by <i>Nature Reviews Cancer</i> ).
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_npg()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_npg()
```

---

`scale_color_observable`*Observable 10 color scales*

---

## Description

See `pal_observable()` for details.

## Usage

```
scale_color_observable(palette = c("observable10"), alpha = 1, ...)
```

```
scale_colour_observable(palette = c("observable10"), alpha = 1, ...)
```

```
scale_fill_observable(palette = c("observable10"), alpha = 1, ...)
```

## Arguments

<code>palette</code>	Palette type. Currently there is one available option: "observable10" (10-color palette).
<code>alpha</code>	Transparency level, a real number in (0, 1]. See <code>alpha</code> in <code>grDevices::rgb()</code> for details.
<code>...</code>	Additional parameters for <code>ggplot2::discrete_scale()</code> .

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## References

Pettiross J (2023). "Crafting data colors and staying on brand." *Observable blog*. <https://observablehq.com/blog/crafting-data-colors>

## Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_observable()

ggplot(
```

```
subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
aes(x = depth, fill = cut)
) +
geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
theme_bw() +
scale_fill_observable()
```

---

scale\_color\_rickandmorty

*Rick and Morty color scales*

---

### Description

See [pal\\_rickandmorty\(\)](#) for details.

### Usage

```
scale_color_rickandmorty(palette = c("schwifty"), alpha = 1, ...)
```

```
scale_colour_rickandmorty(palette = c("schwifty"), alpha = 1, ...)
```

```
scale_fill_rickandmorty(palette = c("schwifty"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "schwifty" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_rickandmorty()
```



```
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_bw() +  
  scale_fill_rickandmorty()
```

---

scale\_color\_simpsons *The Simpsons color scales*

---

### Description

See [pal\\_simpsons\(\)](#) for details.

### Usage

```
scale_color_simpsons(palette = c("springfield"), alpha = 1, ...)
```

```
scale_colour_simpsons(palette = c("springfield"), alpha = 1, ...)
```

```
scale_fill_simpsons(palette = c("springfield"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "springfield" (16-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw() +
```

```
scale_color_simpsons()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_simpsons()
```

---

scale\_color\_startrek *Star Trek color scales*

---

### Description

See [pal\\_startrek\(\)](#) for details.

### Usage

```
scale_color_startrek(palette = c("uniform"), alpha = 1, ...)
```

```
scale_colour_startrek(palette = c("uniform"), alpha = 1, ...)
```

```
scale_fill_startrek(palette = c("uniform"), alpha = 1, ...)
```

### Arguments

palette	Palette type. Currently there is one available option: "uniform" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_startrek()
```

```
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_bw() +  
  scale_fill_startrek()
```

---

scale\_color\_tron      *Tron Legacy color scales*

---

## Description

See [pal\\_tron\(\)](#) for details.

## Usage

```
scale_color_tron(palette = c("legacy"), alpha = 1, ...)  
scale_colour_tron(palette = c("legacy"), alpha = 1, ...)  
scale_fill_tron(palette = c("legacy"), alpha = 1, ...)
```

## Arguments

palette	Palette type. Currently there is one available option: "legacy" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_dark() +  
  theme(  
    panel.background = element_rect(fill = "#2D2D2D"),
```

```

    legend.key = element_rect(fill = "#2D2D2D")
  ) +
  scale_color_tron()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_dark() +
  theme(
    panel.background = element_rect(fill = "#2D2D2D")
  ) +
  scale_fill_tron()

```

---

 scale\_color\_tw3

*Tailwind CSS color scales*


---

## Description

See [pal\\_tw3\(\)](#) for details.

## Usage

```

scale_color_tw3(
  palette = c("slate", "gray", "zinc", "neutral", "stone", "red", "orange", "amber",
    "yellow", "lime", "green", "emerald", "teal", "cyan", "sky", "blue", "indigo",
    "violet", "purple", "fuchsia", "pink", "rose"),
  alpha = 1,
  reverse = FALSE,
  ...
)

scale_colour_tw3(
  palette = c("slate", "gray", "zinc", "neutral", "stone", "red", "orange", "amber",
    "yellow", "lime", "green", "emerald", "teal", "cyan", "sky", "blue", "indigo",
    "violet", "purple", "fuchsia", "pink", "rose"),
  alpha = 1,
  reverse = FALSE,
  ...
)

scale_fill_tw3(
  palette = c("slate", "gray", "zinc", "neutral", "stone", "red", "orange", "amber",
    "yellow", "lime", "green", "emerald", "teal", "cyan", "sky", "blue", "indigo",
    "violet", "purple", "fuchsia", "pink", "rose"),
  alpha = 1,
  reverse = FALSE,

```

```
    ...
  )
```

### Arguments

palette	<p>Palette type. There are 22 available options:</p> <ul style="list-style-type: none"> <li>• "slate"</li> <li>• "gray"</li> <li>• "zinc"</li> <li>• "neutral"</li> <li>• "stone"</li> <li>• "red"</li> <li>• "orange"</li> <li>• "amber"</li> <li>• "yellow"</li> <li>• "lime"</li> <li>• "green"</li> <li>• "emerald"</li> <li>• "teal"</li> <li>• "cyan"</li> <li>• "sky"</li> <li>• "blue"</li> <li>• "indigo"</li> <li>• "violet"</li> <li>• "purple"</li> <li>• "fuchsia"</li> <li>• "pink"</li> <li>• "rose"</li> </ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <code>grDevices::rgb()</code> for details.
reverse	Logical. Should the order of the colors be reversed?
...	Additional parameters for <code>ggplot2::discrete_scale()</code> .

### Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

### Examples

```
library("ggplot2")

data("mtcars")
cor <- abs(cor(mtcars))
cor_melt <- data.frame(
  Var1 = rep(seq_len(nrow(cor)), times = ncol(cor)),
```

```
Var2 = rep(seq_len(ncol(cor)), each = nrow(cor)),
value = as.vector(cor)
)

ggplot(
  cor_melt,
  aes(x = Var1, y = Var2, fill = value)
) +
  geom_tile(colour = "black", size = 0.3) +
  theme_bw() +
  scale_fill_tw3("slate")
```

---

scale\_color\_uchicago *The University of Chicago color scales*

---

## Description

See [pal\\_uchicago\(\)](#) for details.

## Usage

```
scale_color_uchicago(palette = c("default", "light", "dark"), alpha = 1, ...)
```

```
scale_colour_uchicago(palette = c("default", "light", "dark"), alpha = 1, ...)
```

```
scale_fill_uchicago(palette = c("default", "light", "dark"), alpha = 1, ...)
```

## Arguments

palette	Palette type. There are three available options: <ul style="list-style-type: none"><li>"default" (9-color palette);</li><li>"light" (9-color light palette);</li><li>"dark" (9-color dark palette).</li></ul>
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

## Author(s)

Nan Xiao | [me@nanx.me](mailto:me@nanx.me) | <https://nanx.me>

## References

[https://news.uchicago.edu/sites/default/files/attachments/\\_uchicago.identity.guidelines.pdf](https://news.uchicago.edu/sites/default/files/attachments/_uchicago.identity.guidelines.pdf)

**Examples**

```

library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_uchicago()
p2 + scale_fill_uchicago()

p1 + scale_color_uchicago(palette = "light")
p2 + scale_fill_uchicago(palette = "light")

p1 + scale_color_uchicago(palette = "dark")
p2 + scale_fill_uchicago(palette = "dark")

```

---

scale\_color\_ucscgb      *UCSC Genome Browser color scales*

---

**Description**

See [pal\\_ucscgb\(\)](#) for details.

**Usage**

```

scale_color_ucscgb(palette = c("default"), alpha = 1, ...)

scale_colour_ucscgb(palette = c("default"), alpha = 1, ...)

scale_fill_ucscgb(palette = c("default"), alpha = 1, ...)

```

**Arguments**

palette	Palette type. Currently there is one available option: "default" (26-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in <a href="#">grDevices::rgb()</a> for details.
...	Additional parameters for <a href="#">ggplot2::discrete_scale()</a> .

**Author(s)**

Nan Xiao | <me@nanx.me> | <https://nanx.me>

**Examples**

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() +
  scale_color_ucscgb()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() +
  scale_fill_ucscgb()
```



# Index

`ggplot2::discrete_scale()`, 26, 27, 29, 30, 32, 33, 35–42, 44–51, 53–55  
`grDevices::rgb()`, 3–12, 14–18, 20–24, 26, 27, 29, 30, 32, 33, 35–42, 44–51, 53–55

`pal_aaas`, 3  
`pal_aaas()`, 26  
`pal_bmj`, 4  
`pal_bmj()`, 27  
`pal_bs5`, 4  
`pal_bs5()`, 28  
`pal_cosmic`, 5  
`pal_cosmic()`, 30  
`pal_d3`, 6  
`pal_d3()`, 31  
`pal_flatui`, 7  
`pal_flatui()`, 33  
`pal_frontiers`, 8  
`pal_frontiers()`, 34  
`pal_futurama`, 8  
`pal_futurama()`, 35  
`pal_gsea`, 9  
`pal_gsea()`, 36  
`pal_igv`, 10  
`pal_igv()`, 37  
`pal_jama`, 10  
`pal_jama()`, 39  
`pal_jco`, 11  
`pal_jco()`, 40  
`pal_lancet`, 12  
`pal_lancet()`, 41  
`pal_locuszoom`, 12  
`pal_locuszoom()`, 42  
`pal_material`, 13  
`pal_material()`, 43  
`pal_nejm`, 14  
`pal_nejm()`, 45  
`pal_npg`, 15  
`pal_npg()`, 46

`pal_observable`, 15  
`pal_observable()`, 47  
`pal_rickandmorty`, 16  
`pal_rickandmorty()`, 48  
`pal_simpsons`, 17  
`pal_simpsons()`, 49  
`pal_startrek`, 17  
`pal_startrek()`, 50  
`pal_tron`, 18  
`pal_tron()`, 51  
`pal_tw3`, 19  
`pal_tw3()`, 52  
`pal_uchicago`, 20  
`pal_uchicago()`, 54  
`pal_ucscgb`, 21  
`pal_ucscgb()`, 55

`rgb_bs5`, 21  
`rgb_gsea`, 23  
`rgb_material`, 23  
`rgb_tw3`, 25

`scale_color_aaas`, 26  
`scale_color_bmj`, 27  
`scale_color_bs5`, 28  
`scale_color_cosmic`, 30  
`scale_color_d3`, 31  
`scale_color_flatui`, 33  
`scale_color_frontiers`, 34  
`scale_color_futurama`, 35  
`scale_color_gsea`, 36  
`scale_color_igv`, 37  
`scale_color_jama`, 39  
`scale_color_jco`, 40  
`scale_color_lancet`, 41  
`scale_color_locuszoom`, 42  
`scale_color_material`, 43  
`scale_color_nejm`, 45  
`scale_color_npg`, 46  
`scale_color_observable`, 47

- scale\_color\_rickandmorty, 48
- scale\_color\_simpsons, 49
- scale\_color\_startrek, 50
- scale\_color\_tron, 51
- scale\_color\_tw3, 52
- scale\_color\_uchicago, 54
- scale\_color\_ucscgb, 55
- scale\_colour\_aaas (scale\_color\_aaas), 26
- scale\_colour\_bmj (scale\_color\_bmj), 27
- scale\_colour\_bs5 (scale\_color\_bs5), 28
- scale\_colour\_cosmic
  - (scale\_color\_cosmic), 30
- scale\_colour\_d3 (scale\_color\_d3), 31
- scale\_colour\_flatui
  - (scale\_color\_flatui), 33
- scale\_colour\_frontiers
  - (scale\_color\_frontiers), 34
- scale\_colour\_futurama
  - (scale\_color\_futurama), 35
- scale\_colour\_gsea (scale\_color\_gsea), 36
- scale\_colour\_igv (scale\_color\_igv), 37
- scale\_colour\_jama (scale\_color\_jama), 39
- scale\_colour\_jco (scale\_color\_jco), 40
- scale\_colour\_lancet
  - (scale\_color\_lancet), 41
- scale\_colour\_locuszoom
  - (scale\_color\_locuszoom), 42
- scale\_colour\_material
  - (scale\_color\_material), 43
- scale\_colour\_nejm (scale\_color\_nejm), 45
- scale\_colour\_npg (scale\_color\_npg), 46
- scale\_colour\_observable
  - (scale\_color\_observable), 47
- scale\_colour\_rickandmorty
  - (scale\_color\_rickandmorty), 48
- scale\_colour\_simpsons
  - (scale\_color\_simpsons), 49
- scale\_colour\_startrek
  - (scale\_color\_startrek), 50
- scale\_colour\_tron (scale\_color\_tron), 51
- scale\_colour\_tw3 (scale\_color\_tw3), 52
- scale\_colour\_uchicago
  - (scale\_color\_uchicago), 54
- scale\_colour\_ucscgb
  - (scale\_color\_ucscgb), 55
- scale\_fill\_aaas (scale\_color\_aaas), 26
- scale\_fill\_bmj (scale\_color\_bmj), 27
- scale\_fill\_bs5 (scale\_color\_bs5), 28
- scale\_fill\_cosmic (scale\_color\_cosmic), 30
- scale\_fill\_d3 (scale\_color\_d3), 31
- scale\_fill\_flatui (scale\_color\_flatui), 33
- scale\_fill\_frontiers
  - (scale\_color\_frontiers), 34
- scale\_fill\_futurama
  - (scale\_color\_futurama), 35
- scale\_fill\_gsea (scale\_color\_gsea), 36
- scale\_fill\_igv (scale\_color\_igv), 37
- scale\_fill\_jama (scale\_color\_jama), 39
- scale\_fill\_jco (scale\_color\_jco), 40
- scale\_fill\_lancet (scale\_color\_lancet), 41
- scale\_fill\_locuszoom
  - (scale\_color\_locuszoom), 42
- scale\_fill\_material
  - (scale\_color\_material), 43
- scale\_fill\_nejm (scale\_color\_nejm), 45
- scale\_fill\_npg (scale\_color\_npg), 46
- scale\_fill\_observable
  - (scale\_color\_observable), 47
- scale\_fill\_rickandmorty
  - (scale\_color\_rickandmorty), 48
- scale\_fill\_simpsons
  - (scale\_color\_simpsons), 49
- scale\_fill\_startrek
  - (scale\_color\_startrek), 50
- scale\_fill\_tron (scale\_color\_tron), 51
- scale\_fill\_tw3 (scale\_color\_tw3), 52
- scale\_fill\_uchicago
  - (scale\_color\_uchicago), 54
- scale\_fill\_ucscgb (scale\_color\_ucscgb), 55