Package 'ggsci'

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Type Package

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

Version 2.9

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.

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LazyData TRUE

VignetteBuilder knitr

URL https://nanx.me/ggsci/, https://github.com/road2stat/ggsci

BugReports https://github.com/road2stat/ggsci/issues

Depends R (>= 3.0.2)

Imports grDevices, scales, ggplot2 (>= 2.0.0)

Suggests knitr, rmarkdown, gridExtra, reshape2

Encoding UTF-8

RoxygenNote 6.0.1.9000

NeedsCompilation no

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Repository CRAN

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R topics documented:

`ggsci-package` *Scientific Journal and Sci-Fi Themed Color Palettes for 'ggplot2'*

Description

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

Details

Opened the vignette via `vignette("ggsci")`.

Package:	ggsci
Type:	Package
License:	GPL-3

Author(s)

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`pal_aaas` *AAAS Journal Color Palettes*

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 *Science*).
`alpha`	Transparency level, a real number in (0, 1]. See `alpha` in `rgb` for details.

Author(s)

Nan Xiao <<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_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	Palette type. There are 4 available options: "category10" (10-color palette); "category20" (20-color palette); "category20b" (20-color palette); "category20c" (20-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

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_futurama *The 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 rgb 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 rgb 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: "default" (51-color palette); "alternating" (2-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

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

References

James T. Robinson, Helga Thorvaldsd\'ottir, 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 rgb for details.

Author(s)

Nan Xiao <<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 `rgb` for details.

Author(s)

Nan Xiao <<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 *Lancet Journal Color Palettes*

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 *Lancet Oncology*).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<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 *LocusZoom Color Palette*

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 rgb 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` *Material Design Color Palettes*

Description

The Material Design 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"`
- `"light-green"`
- `"lime"`
- `"yellow"`
- `"amber"`
- `"orange",`
- `"deep-orange"`
- `"brown"`

- "grey"
- "blue-grey"

See the material design color guidelines for details.

n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb 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 rgb 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 *NPG Journal Color Palettes*

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 *Nature Reviews Cancer*).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<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_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 rgb 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 rgb for details.

Author(s)

Nan Xiao <<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 rgb 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 alpha in rgb 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_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 3 available options: `"default"` (9-color palette); `"light"` (9-color light palette); `"dark"` (9-color dark palette).
`alpha`	Transparency level, a real number in (0, 1]. See `alpha` in `rgb` 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

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 rgb 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_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 rgb for details.
reverse	Logical. Should the order of the colors be reversed?

Note

The 12 base colors used in this palette are derived from this document.

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

The Material Design 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:

- "red"
- "pink"
- "purple"
- "deep-purple"
- "indigo"
- "blue"
- "light-blue"
- "cyan"
- "teal"
- "green"
- "light-green"
- "lime"
- "yellow"
- "amber"
- "orange",

- "deep-orange"
- "brown"
- "grey"
- "blue-grey"

See the material design color guidelines for details.

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

Author(s)

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

References

https://material.io/guidelines/style/color.html

Examples

```
library("scales")
show_col(pal_material("indigo")(10))
show_col(pal_material("indigo", 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 *Science*).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

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_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 4 available options: "category10" (10-color palette); "category20" (20-color palette); "category20b" (20-color palette); "category20c" (20-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

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("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_futurama *The 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 rgb for details.
...	additional parameters for discrete_scale

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_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 rgb for details.
reverse	Logical. Should the order of the colors be reversed?
...	additional parameters for discrete_scale

Author(s)

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

Examples

```
library("ggplot2")
library("reshape2")
data("mtcars")

cor = cor(mtcars)
cor_melt = melt(cor)

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

---

scale_color_igv *Integrative Genomics Viewer (IGV) Color Scales*

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: "default" (51-color palette); "alternating" (2-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<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 rgb for details.
...	additional parameters for discrete_scale

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_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 rgb for details.
...	additional parameters for discrete_scale

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_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 *Lancet Oncology*).
`alpha`	Transparency level, a real number in (0, 1]. See `alpha` in `rgb` for details.
`...`	additional parameters for `discrete_scale`

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

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 rgb for details.
...	additional parameters for discrete_scale

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 Palettes*

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"

See the material design color guidelines for details.

alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?
...	additional parameters for discrete_scale

Author(s)

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

Examples

```
library("ggplot2")
library("reshape2")
data("mtcars")

cor = abs(cor(mtcars))
cor_melt = melt(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 rgb for details.
...	additional parameters for discrete_scale

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_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 *Nature Reviews Cancer*).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

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_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_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 rgb for details.
...	additional parameters for discrete_scale

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_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 rgb for details.
...	additional parameters for discrete_scale

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_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 `rgb` for details.
`...`	additional parameters for `discrete_scale`

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_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 rgb for details.
...	additional parameters for discrete_scale

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_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_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 3 available options: "default" (9-color palette); "light" (9-color light palette); "dark" (9-color dark palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

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

References

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 `rgb` for details.
`...`	additional parameters for `discrete_scale`

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()
```

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