example

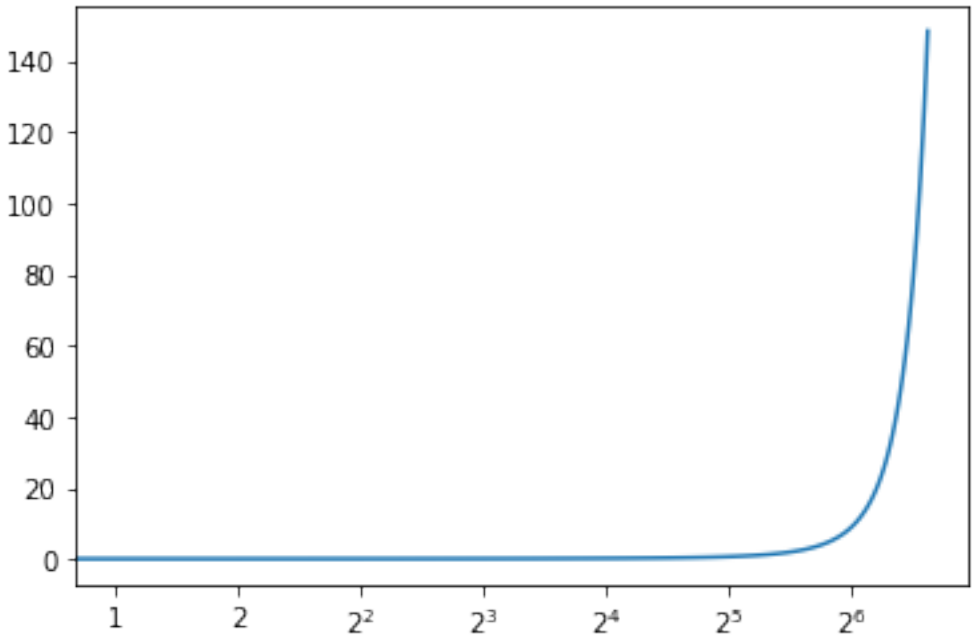
December 12, 2021

1 plastik

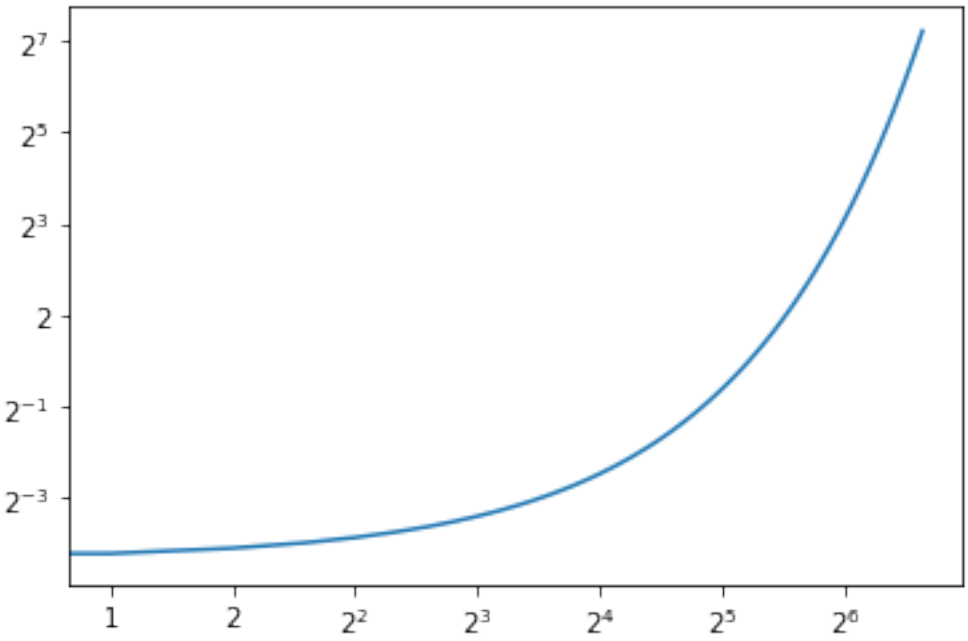
[ ]:
```
# General imports
import matplotlib
import matplotlib.pyplot as plt
import numpy as np
import plastik
```

1.1 Log tick format

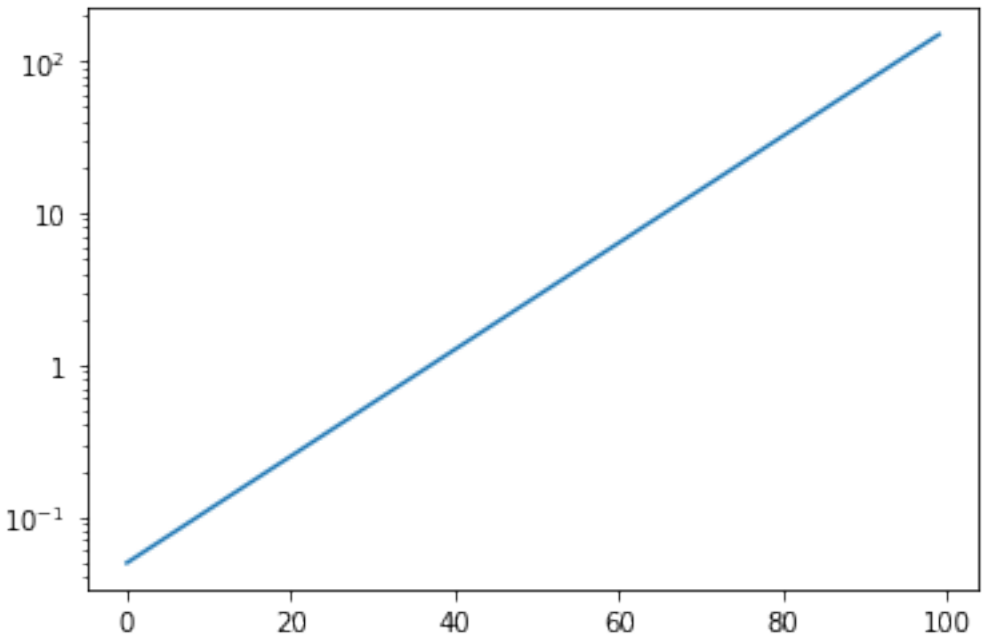
[ ]:
```
a = np.exp(np.linspace(-3, 5, 100))
base = 2  # Default is 10, but 2 works equally well
plt.figure()
plastik.log_tick_format(plt.gca(), "x", base=base)

# Do plotting ...
plt.plot(a)
plt.savefig("figures/log_tick_format1.png")
plt.show(block=False)
plastik.dark_theme(plt.gca())
plt.savefig("figures/log_tick_format1_dark.png")
plt.close("all")
```



[ ]:
```
a = np.exp(np.linspace(-3, 5, 100))
base = 2  # Default is 10, but 2 works equally well
fig = plt.figure()
ax = fig.add_subplot(111)
ax.loglog()
plastik.log_tick_format(ax, "both", base=base)

# Do plotting ...
ax.plot(a)
plt.savefig("figures/log_tick_format2.png")
plt.show(block=False)
plastik.dark_theme(plt.gca())
plt.savefig("figures/log_tick_format2_dark.png")
plt.close("all")
```

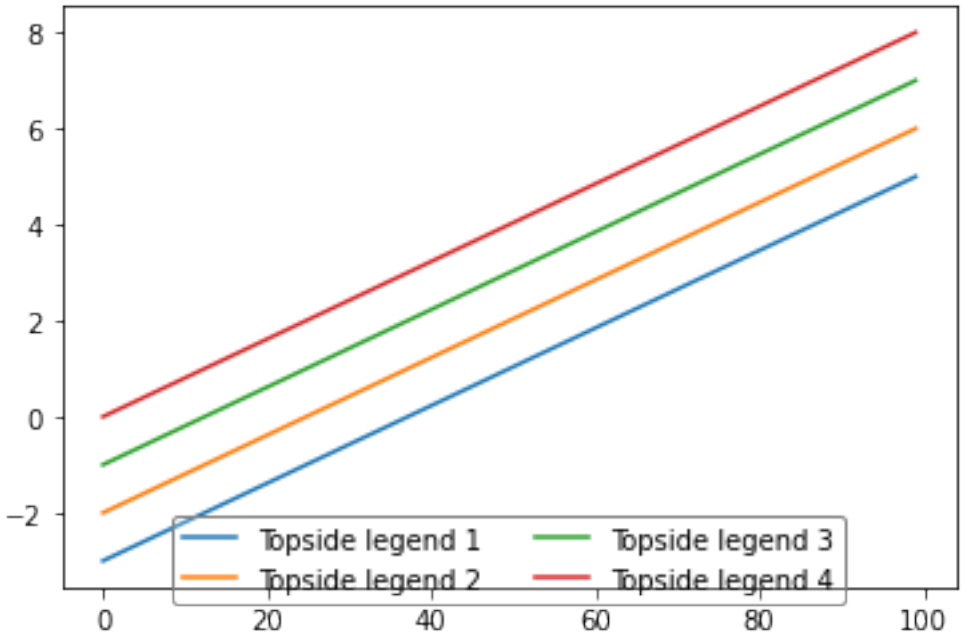


[ ]:
```
a = np.exp(np.linspace(-3, 5, 100))
base = 2  # Default is 10, but 2 works equally well
fig = plt.figure()
ax = fig.add_subplot(111)
ax = plastik.log_tick_format(ax, "y")

# If you do:
ax.semilogy(a)
# the axis will be re-set, in which case you will have to run
plastik.log_tick_format(ax, "y")
# again. (But just use plt.plot(), so much easier.)
plt.savefig("figures/log_tick_format3.png")
plt.show(block=False)
plastik.dark_theme(plt.gca())
plt.savefig("figures/log_tick_format3_dark.png")
plt.close("all")
```

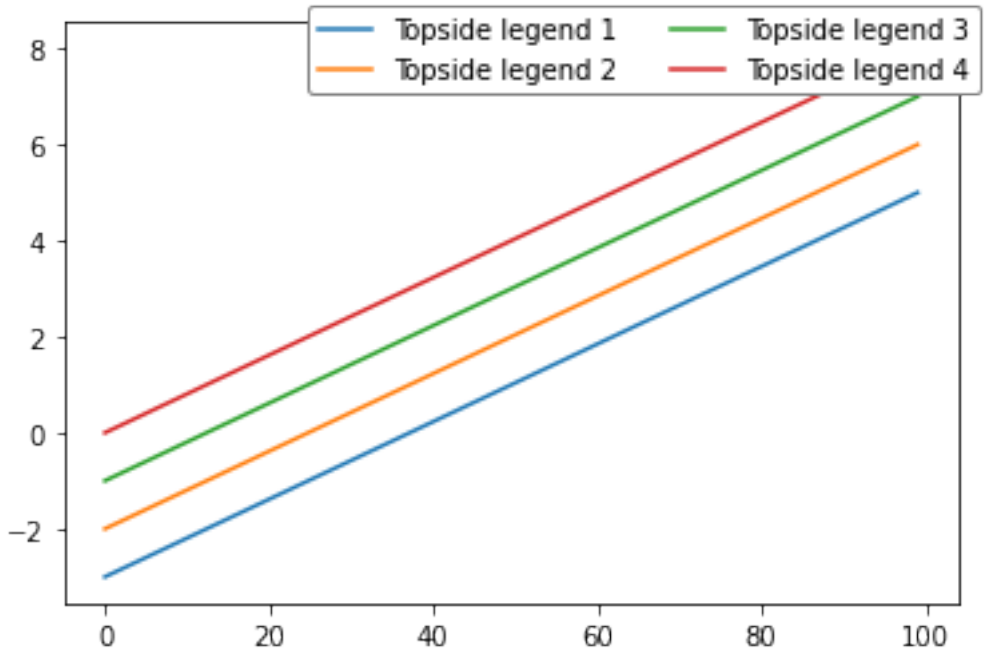


1.2 Topside legends

[ ]:
```
a = np.linspace(-3, 5, 100)
fig = plt.figure()
ax = fig.add_subplot(111)
ax.plot(a, label="Topside legend 1")
ax.plot(a+1, label="Topside legend 2")
ax.plot(a+2, label="Topside legend 3")
ax.plot(a+3, label="Topside legend 4")
plastik.topside_legends(ax, c_max=2, side="bottom", alpha=0.2)
plt.savefig("figures/topside_legends1.png")
plt.show(block=False)
plastik.dark_theme(ax)
plt.savefig("figures/topside_legends1_dark.png")
plt.close("all")
```



[ ]:
```
a = np.linspace(-3, 5, 100)
fig = plt.figure()
ax = fig.add_subplot(111)
ax.plot(a, label="Topside legend 1")
ax.plot(a+1, label="Topside legend 2")
ax.plot(a+2, label="Topside legend 3")
ax.plot(a+3, label="Topside legend 4")
plastik.topside_legends(ax, c_max=3, side="top right", alpha=1)
plt.savefig("figures/topside_legends2.png")
plt.show(block=False)
plastik.dark_theme(ax)
plt.savefig("figures/topside_legends2_dark.png")
plt.close("all")
```

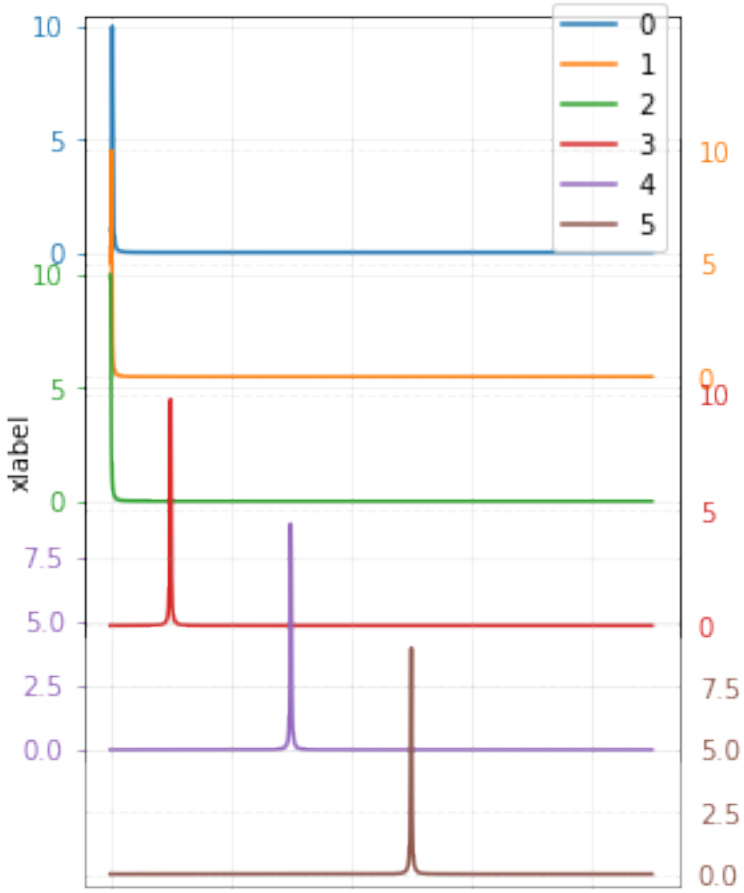


1.3 Ridge

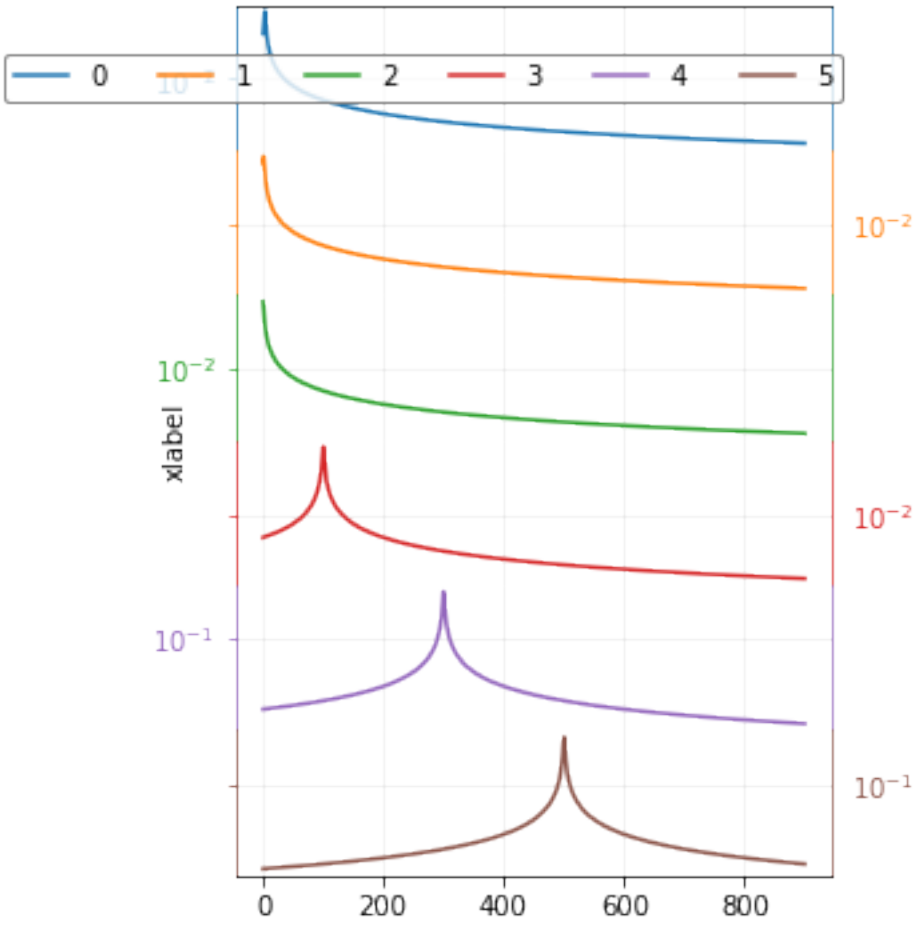
[ ]:
```
x = np.linspace(1e-1, 3e1, 1000) ** 2

def func(x, s):
    return 10 / ((x - s) ** 2 + 1)

dt = [func(x, 3), func(x, 1), func(x, 0), func(x, 100), func(x, 300), func(x,␣
↪500)]
dta = [(x, a) for a in dt]

lab = [f"{i}" for i in range(6)]
```

[ ]:
```
r = plastik.Ridge(dta, "gsz", ylabel="xlabel")
r.main()
f = r.figure
l = r.lines
a = r.top_axes
axs = r.all_axes
a.legend(l, lab)
plt.savefig("figures/ridge1.png")
# plt.show(block=False)
plastik.dark_theme(r.bottom_axes, keep_yaxis=True)
plt.savefig("figures/ridge1_dark.png")
plt.show()
```

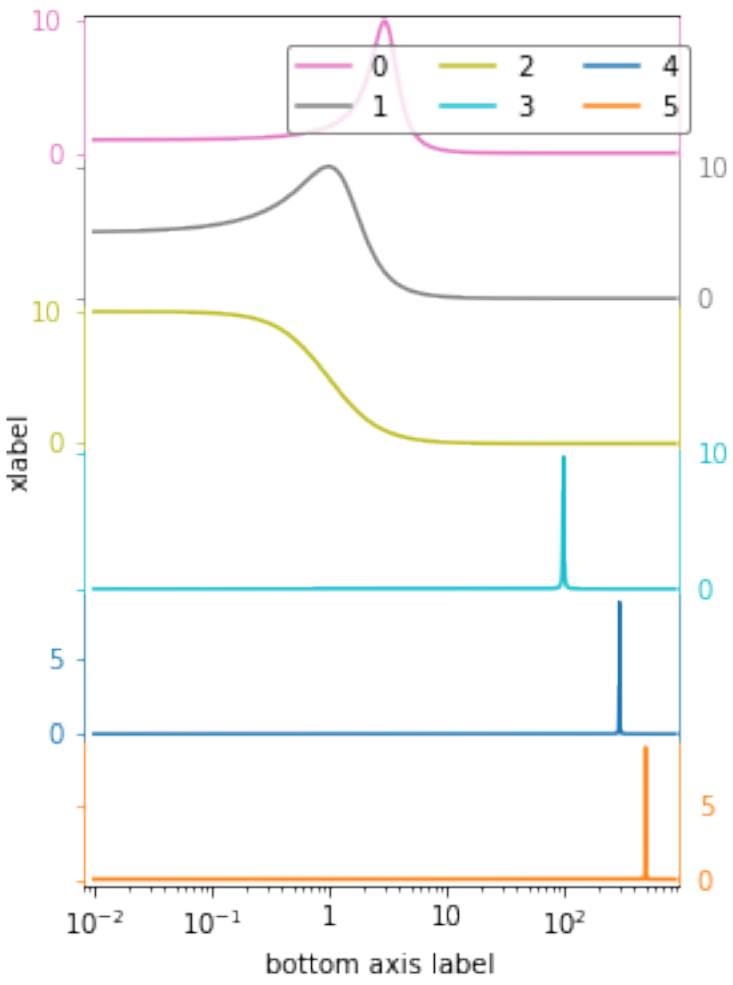
```
plt.close("all")
```



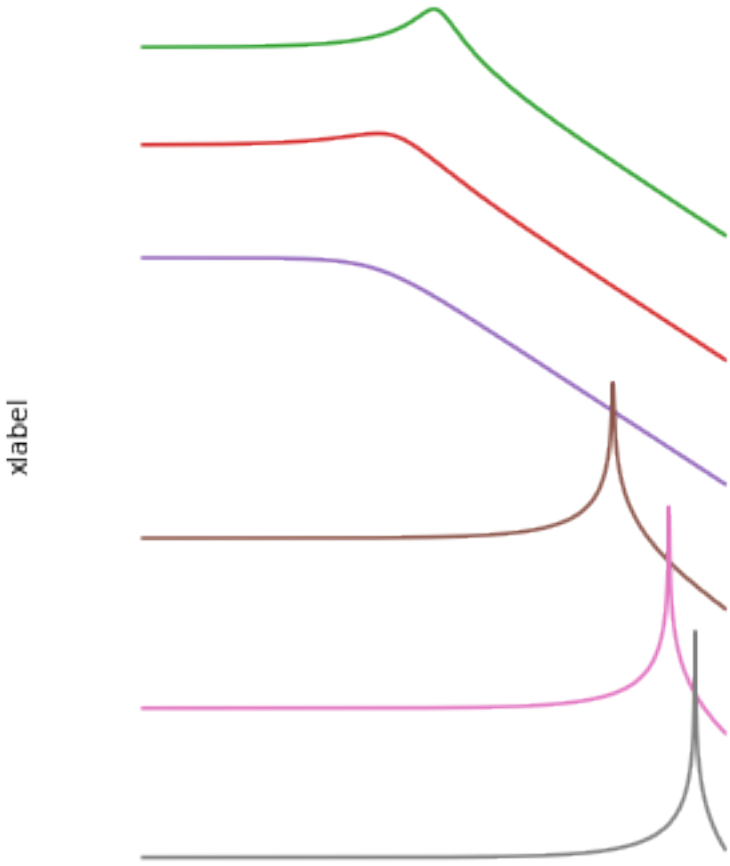
[ ]:
```
r = plastik.Ridge(dta, "gs", ylabel="xlabel")
r.main()
f = r.figure
l = r.lines
a = r.top_axes
axs = r.all_axes
a.legend(l, lab)
plastik.topside_legends(a, l, c_max=6, side="right")
for ax in axs:
    plastik.log_tick_format(ax, which="y")
plt.savefig("figures/ridge2.png")
plt.show(block=False)
plastik.dark_theme(r.bottom_axes)
plt.savefig("figures/ridge2_dark.png")
plt.close("all")
```



[ ]:
```
r = plastik.Ridge(dta, "s", xlabel="bottom axis label", ylabel="xlabel",␣
 ↪pltype="semilogx")
r.main()
f = r.figure
l = r.lines
a = r.top_axes
axs = r.all_axes
a.legend(l, lab)
plastik.topside_legends(a, l, c_max=5, side="right")
for ax in axs:
    plastik.log_tick_format(ax, which="x")
plt.savefig("figures/ridge3.png")
plt.show(block=False)
plastik.dark_theme(r.bottom_axes)
plt.savefig("figures/ridge3_dark.png")
plt.close("all")
```



[ ]:
```
r = plastik.Ridge(dta, "bz", ylabel="xlabel", pltype="loglog")
r.main()
f = r.figure
l = r.lines
a = r.bottom_axes
axs = r.all_axes
for ax in axs:
    plastik.log_tick_format(ax, which="both")
plt.savefig("figures/ridge4.png")
plt.show(block=False)
plastik.dark_theme(r.bottom_axes)
plt.savefig("figures/ridge4_dark.png")
plt.close("all")
```



1.4 Dark theme

[ ]:
```
a = np.exp(np.linspace(-3, 5, 100))
plt.figure()
# Sets axes and labels of given axis to white
plastik.dark_theme(plt.gca())
plastik.log_tick_format(plt.gca(), "both", base=2)
plt.plot(a)
plt.xlabel("white label")
plt.ylabel("ylabel")
plt.savefig("figures/dark_theme.png")
plt.show()
```