In [4]:

```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

In [2]:

```python
df = pd.read_csv("task11.csv", sep=";")
df
```

Out[2]:

	c0	V	Unnamed: 2	c	lgC	t
0	0.00021	0.0	1.0	0.000000	Err:502	0.41
1	0.00021	0.1	0.9	0.000001	-6	1.12
2	0.00021	0.2	0.8	0.000002	-5.6989700043	19.93
3	0.00021	0.3	0.7	0.000003	-5.5228787453	12.13
4	0.00021	0.5	0.5	0.000005	-5.3010299957	11.24
5	0.00021	0.8	0.2	0.000008	-5.096910013	1.95
6	0.00021	1.0	0.0	0.000010	-5	1.31
7	0.00210	0.2	0.8	0.000020	-4.6989700043	1.38
8	0.00210	0.3	0.7	0.000030	-4.5228787453	0.65
9	0.00210	0.5	0.5	0.000050	-4.3010299957	5.69
10	0.00210	0.8	0.2	0.000080	-4.096910013	7.39
11	0.00210	1.0	0.0	0.000100	-4	12.50
12	0.02100	0.2	0.8	0.000200	-3.6989700043	14.96
13	0.02100	0.3	0.7	0.000300	-3.5228787453	14.57
14	0.02100	0.5	0.5	0.000500	-3.3010299957	15.05
15	0.02100	0.8	0.2	0.000800	-3.096910013	16.84
16	0.02100	1.0	0.0	0.001000	-3	16.87

In [13]:

```
plt.figure(figsize=(12, 6))
plt.style.use("ggplot")
plt.plot(np.log(df["c"]), df["t"])
plt.scatter(np.log(df["c"]), df["t"])
plt.title("Зависимость мутности золя от логарифма концентрации электролита")
plt.xlabel("Log C")
plt.ylabel("Мутность")
```

/home/dpreer/.local/lib/python3.6/site-packages/ipykernel_launcher.p
y:3: RuntimeWarning: divide by zero encountered in log
  This is separate from the ipykernel package so we can avoid doing
imports until
/home/dpreer/.local/lib/python3.6/site-packages/ipykernel_launcher.p
y:4: RuntimeWarning: divide by zero encountered in log
  after removing the cwd from sys.path.

Out[13]:

Text(0, 0.5, 'Мутность')