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In [2]: import h_transport_materials as htm
import matplotlib.pyplot as plt

nakamura_sol = htm.solubilities.filter(material=htm.FLIBE, author="nakamura")
```

```
In [3]: print(nakamura_sol)

print(nakamura_sol.pre_exp.to(htm.ureg.mol * htm.ureg.Pa**-1 * htm.ureg.m**-3))

Author: Nakamura
Material: flibe
Year: 2015
Isotope: H
Pre-exponential factor: 5.00×1026 particle/Pa/m3
Activation energy: 1.10×100 eV/particle

829.7923727680385 mole / meter ** 3 / pascal
```

```
In [14]: nakamura_sol_from_paper = htm.Solubility(
    S_0=6.57e2 * htm.ureg.mol * htm.ureg.Pa**-1 * htm.ureg.m**-3,
    E_S=104.8 * htm.ureg.kJ * htm.ureg.mol**-1,
    range=nakamura_sol.range,
    source=nakamura_sol.source,
    material=nakamura_sol.material,
)
print(nakamura_sol_from_paper)
```

```
Author: Nakamura
Material: flibe
Year: 2015
Isotope: None
Pre-exponential factor: 3.96×1026 particle/Pa/m3
Activation energy: 1.09×100 eV/particle
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In [15]: plt.gca().yaxis.set_units(htm.ureg.mol * htm.ureg.Pa**-1 * htm.ureg.m**-3)

htm.plotting.plot(nakamura_sol, label="from points")
htm.plotting.plot(nakamura_sol_from_paper, label="from paper")

plt.yscale("log")
plt.tight_layout()
plt.legend()
plt.show()
```

