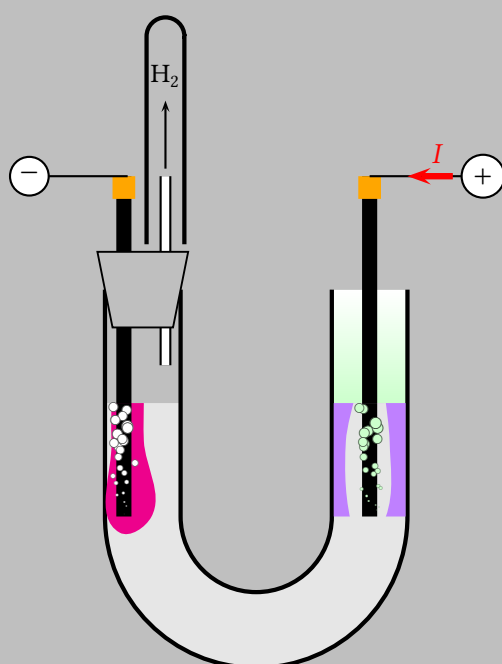


PSTricks

pst-electrolysis
sample images
v.0.01

A PSTricks package for drawing chemical objects

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1 The macros

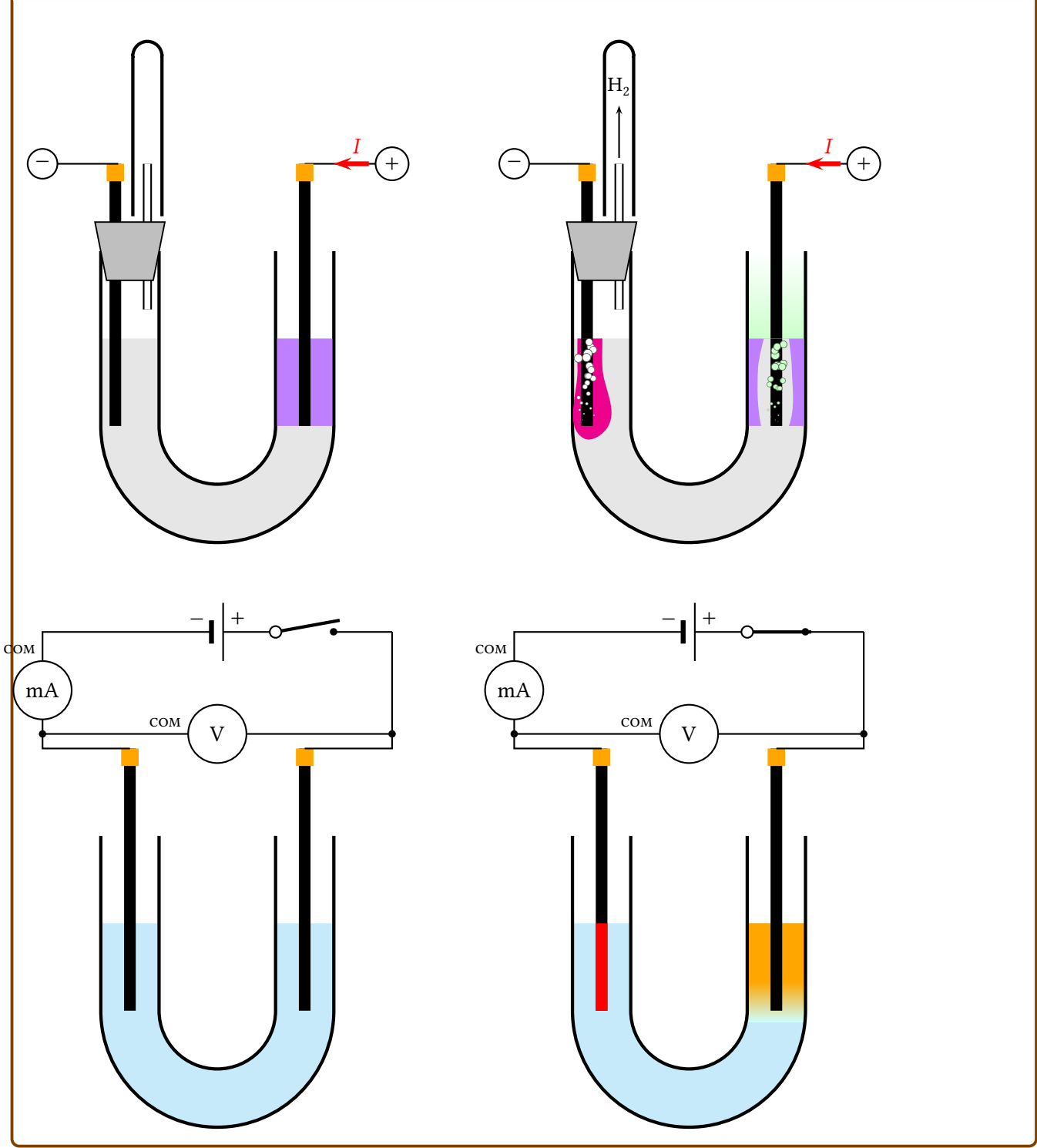
The main Macros

```
1 \psElectrolysisA
2 \psElectrolysisA[labelcode]
3 \psElectrolysisA[labelcode][PScode]
4 \psElectrolysisA[labelcode][PScode](x0,y0)(x1,y1)
5 \psElectrolysisB
6 \psElectrolysisB[labelcode]
7 \psElectrolysisB[labelcode][PScode]
8 \psElectrolysisB[labelcode][PScode](x0,y0)(x1,y1)
9 \psElectrolysisC
10 \psElectrolysisC[labelcode]
11 \psElectrolysisC[labelcode][PScode]
12 \psElectrolysisC[labelcode][PScode](x0,y0)(x1,y1)
13 \psElectrolysisD
14 \psElectrolysisD[labelcode]
15 \psElectrolysisD[labelcode][PScode]
16 \psElectrolysisD[labelcode][PScode](x0,y0)(x1,y1)
17 \psComment*[Options]{arrows}(x0,y0)(x1,y1){Text}[line macro][put macro]
```

The four types of images without any description look like:

default use

```
\psElectrolysisA \hspace{2cm} \psElectrolysisB \\[1cm]
\psElectrolysisC \hspace{2cm} \psElectrolysisD
```

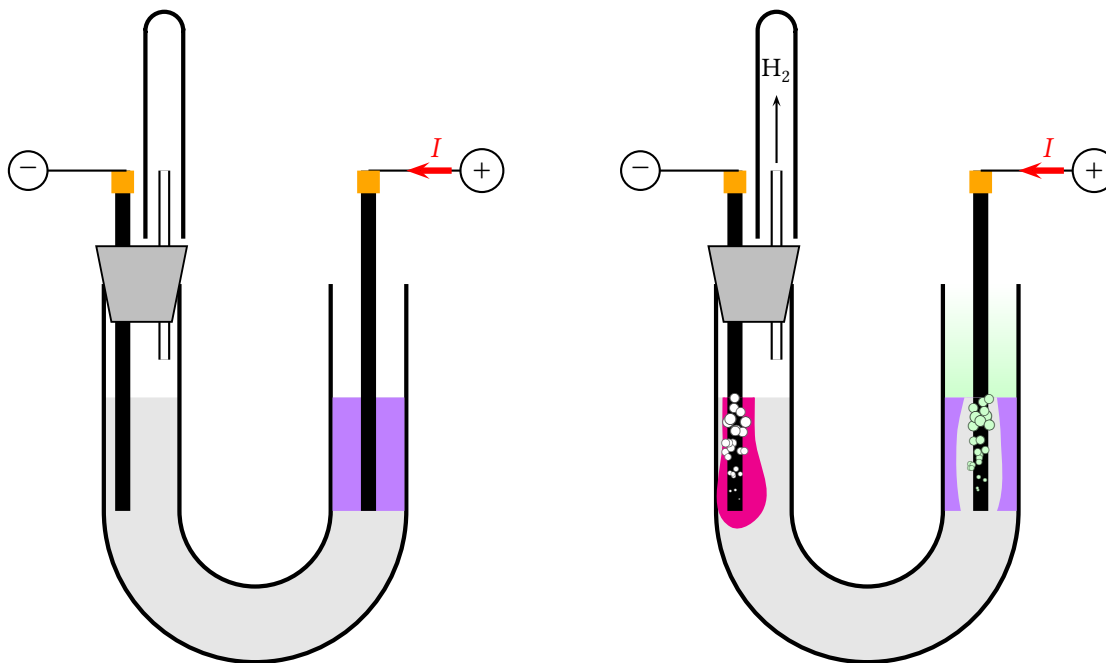


2 Electrolysis of a solution of sodium chloride

2.1 Without arguments

default use of `\psElectrolysisA` and `\psElectrolysisB`

```
\psElectrolysisA \hspace{2cm} \psElectrolysisB
```

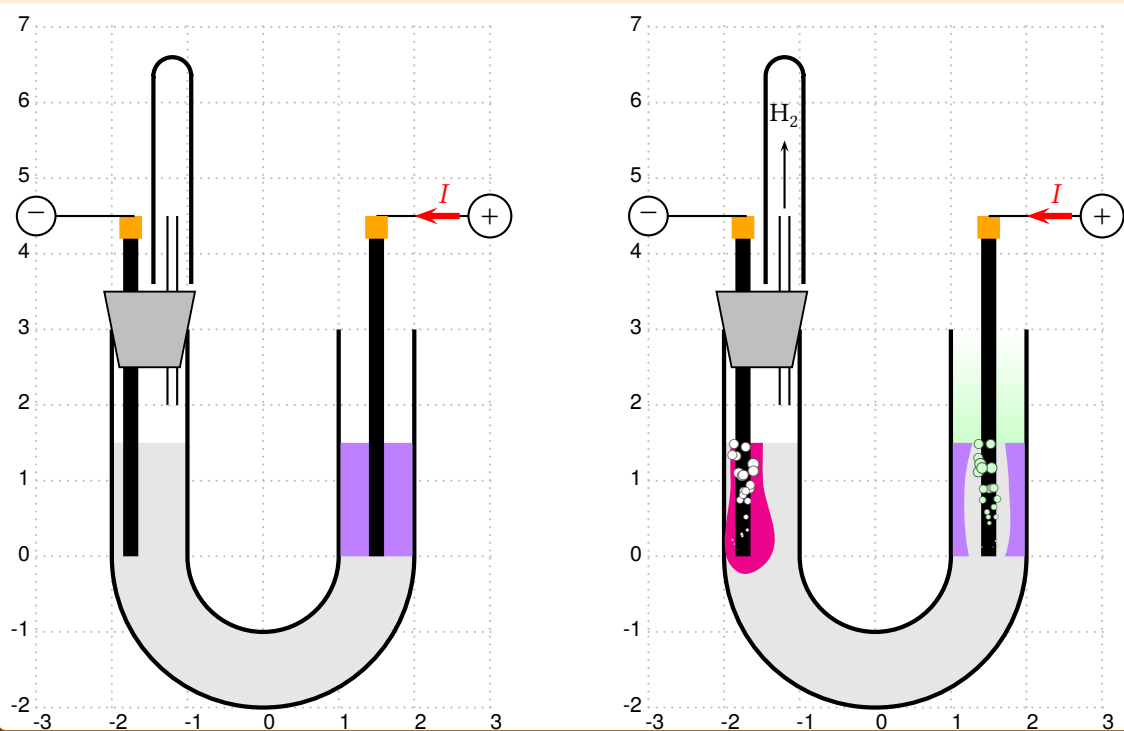


2.2 With arguments for PSTricks with a grid

With a grid it is much more easier to place additional comments.

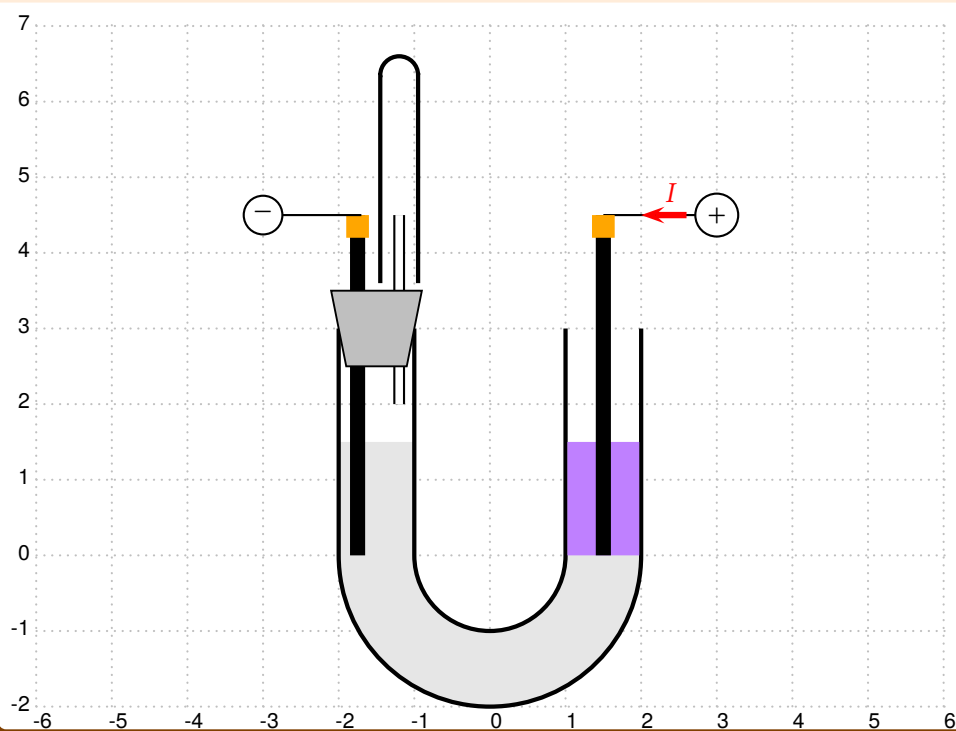
Parameter for PSTricks

```
\psElectrolysisA[showgrid] \hspace{2cm} \psElectrolysisB[showgrid]
```



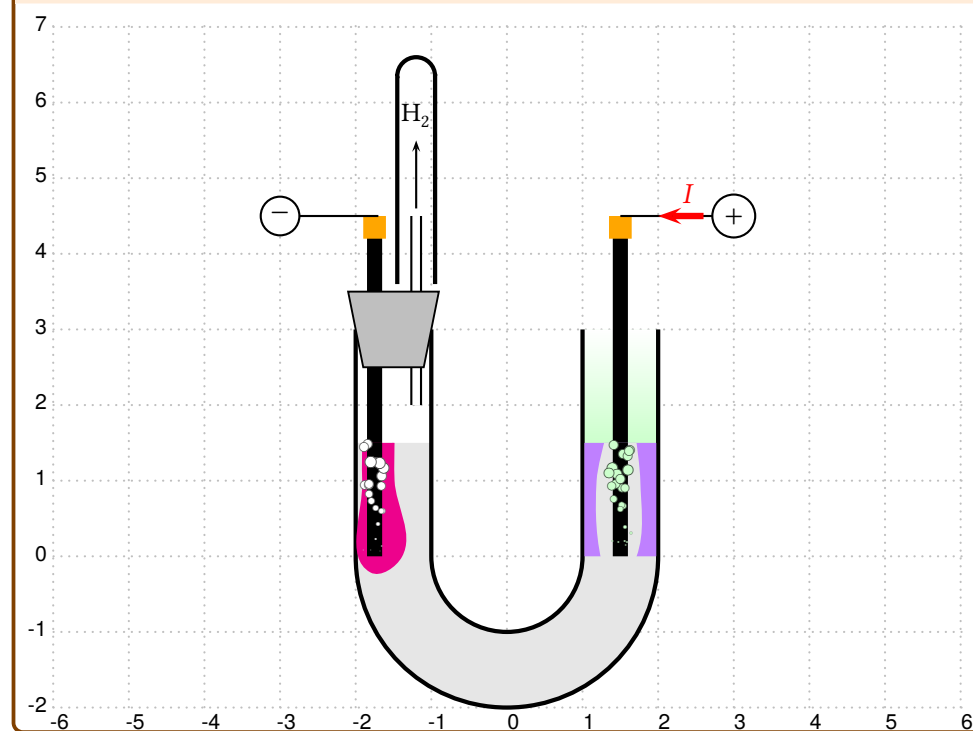
Parameter for PSTricks with coordinates

```
\psElectrolysisA[showgrid](-6,-2)(6,7)
```



Parameter for PSTricks with coordinates

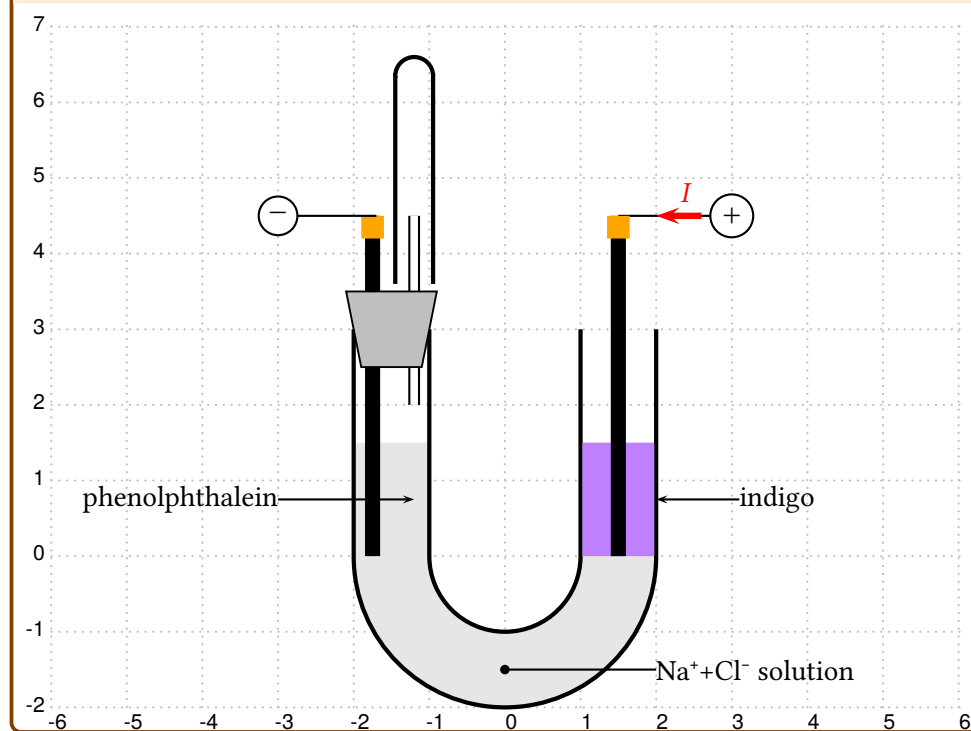
```
\psElectrolysisB[showgrid](-6,-2)(6,7)
```



2.3 With arguments for PSTricks and

Parameter for PSTricks and own comments

```
\psElectrolysisA[showgrid=b][
  {\psComment[ref=r]{->}(-3,0.75)(-1.2,0.75){phenolphthalein}%
  \psComment[ref=l]{->} (3.1,0.75)(2,0.75){indigo}%
  \psComment[ref=l]{-*}(2,-1.5)(0,-1.5){Na++Cl- solution}
  }(-6,-2)(6,7)
```

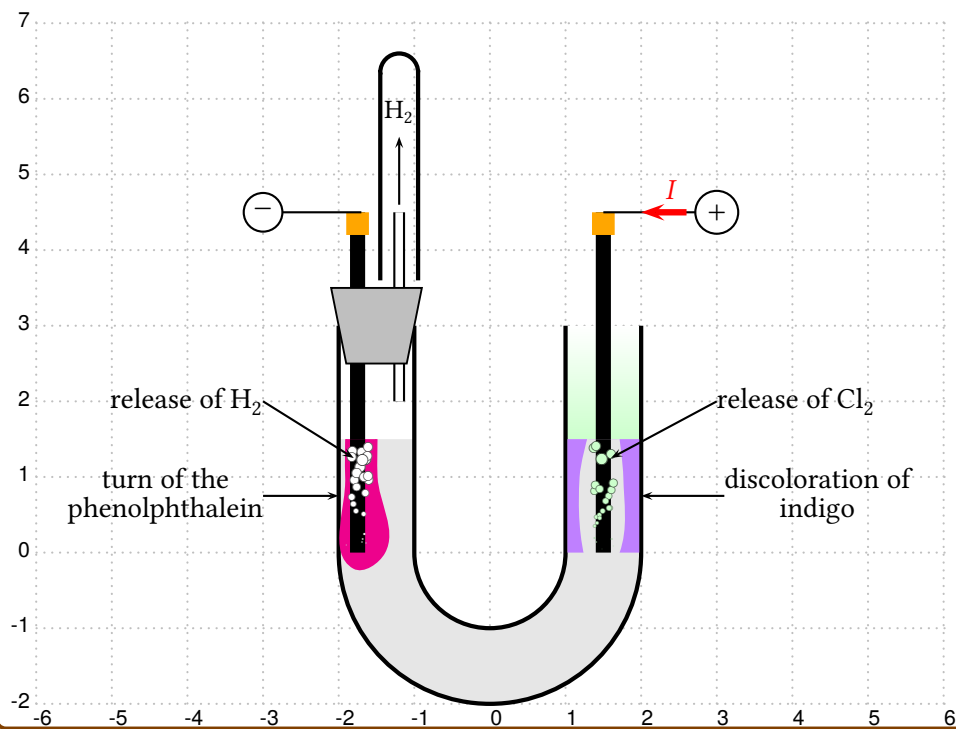


Parameter for PSTricks and own comments

```

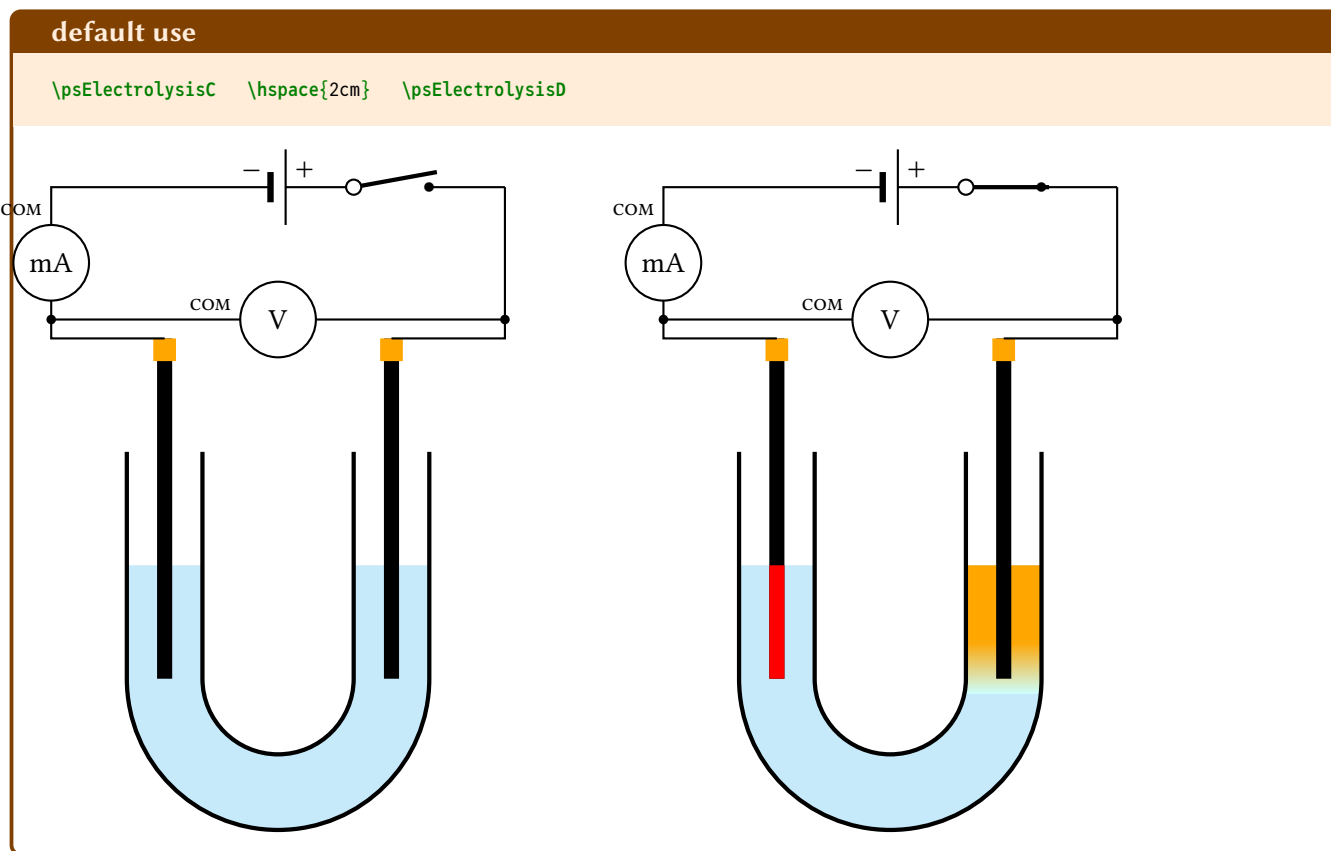
\psElectrolysisB[showgrid=b][
  {\psComment[ref=r]{->}{-3,0.75}(-2,0.75){\shortstack{turn of the\\ phenolphthalein}}}%
  \psComment[ref=l]{->}{3,1,0.75}(2,0.75){\shortstack{discoloration of\\ indigo}}}%
  \psComment[ref=l]{->}{3,2}(1.6,1.25){release of  $\mathrm{Cl}_2$ }%
  \psComment[ref=r]{->}{-3,2}(-1.8,1.25){release of  $\mathrm{H}_2$ }}(-6,-2)(6,7)

```



3 Electrolysis of a copper bromide solution

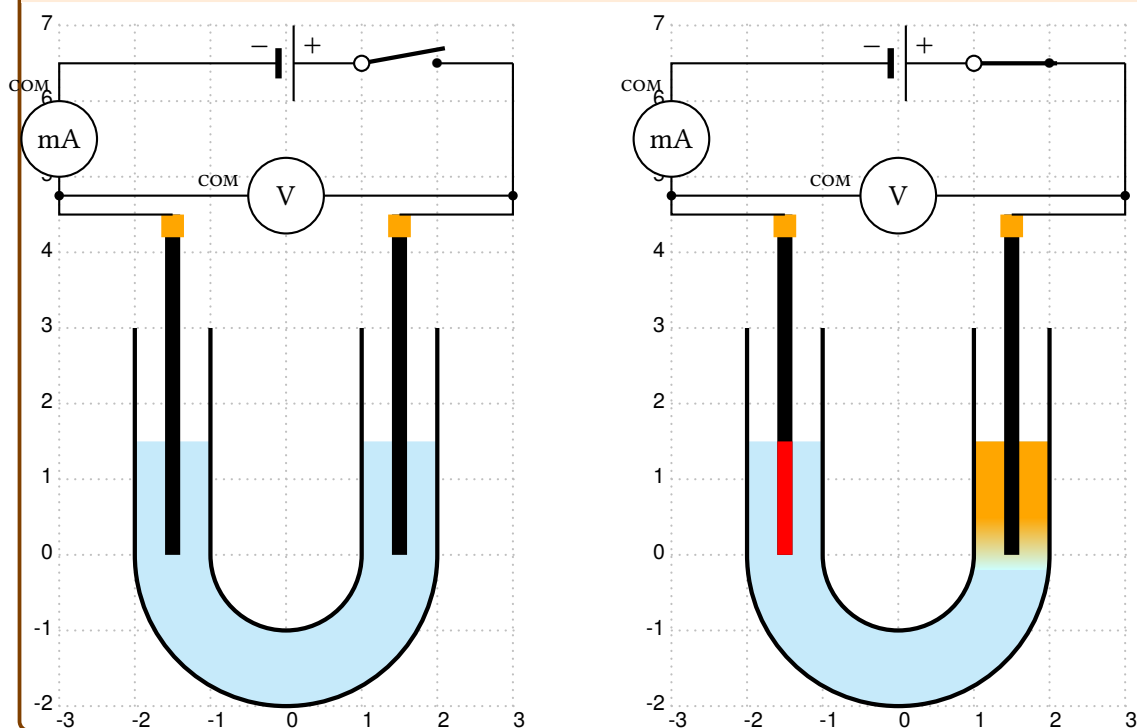
3.1 Without arguments



3.2 With arguments for PSTricks (showing grid)

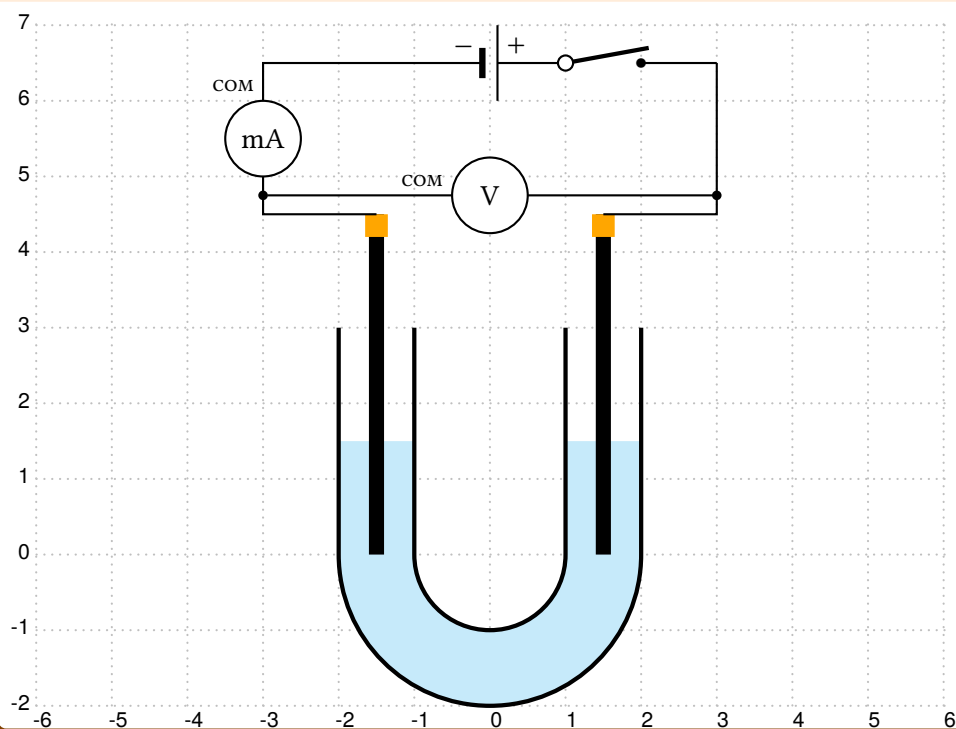
Parameter for PSTricks

```
\psElectrolysisC[showgrid=b] \hspace{2cm} \psElectrolysisD[showgrid=b]
```



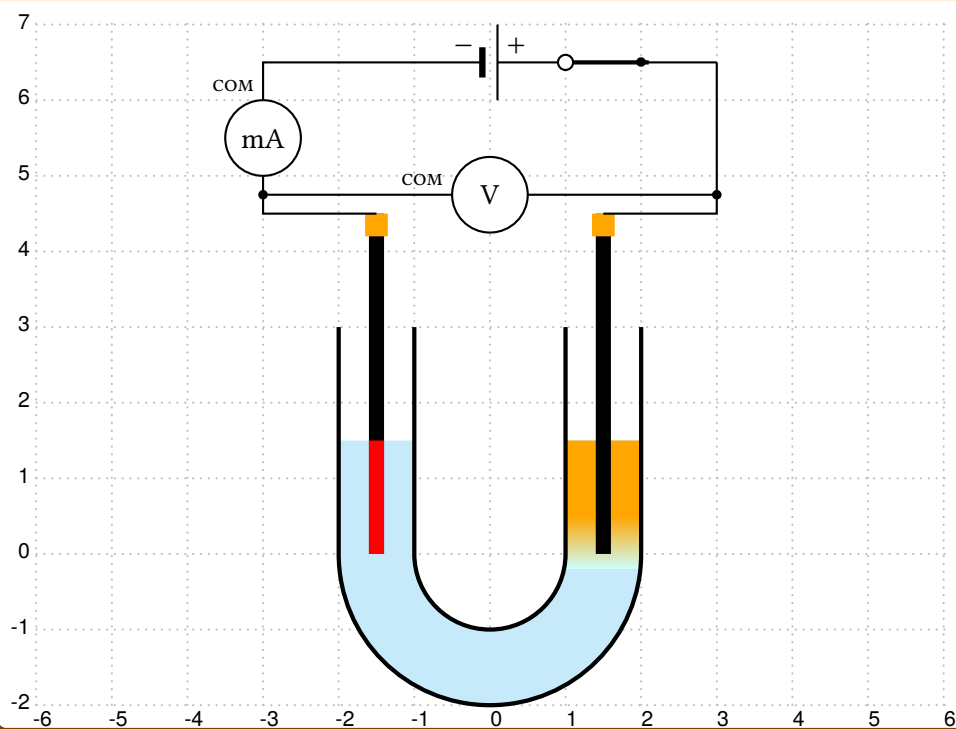
Parameter for PSTricks and using coordinates

```
\psElectrolysisC[showgrid=b](-6,-2)(6,7)
```



Parameter for PSTricks and using coordinates

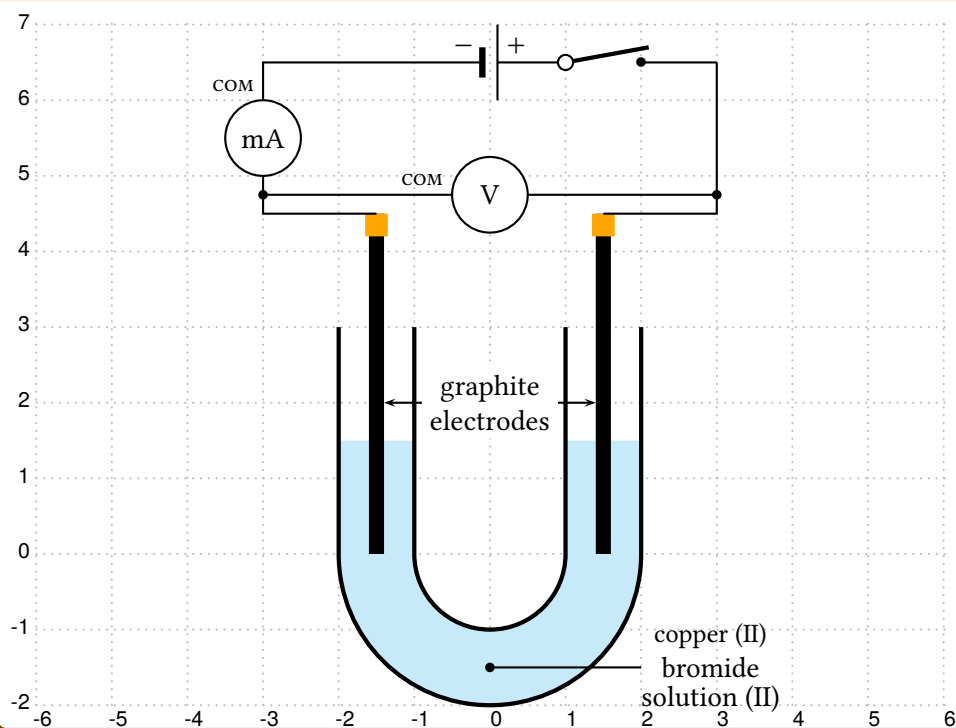
```
\psElectrolysisD[showgrid=b](-6,-2)(6,7)
```



3.3 With arguments for PSTricks and using the switch

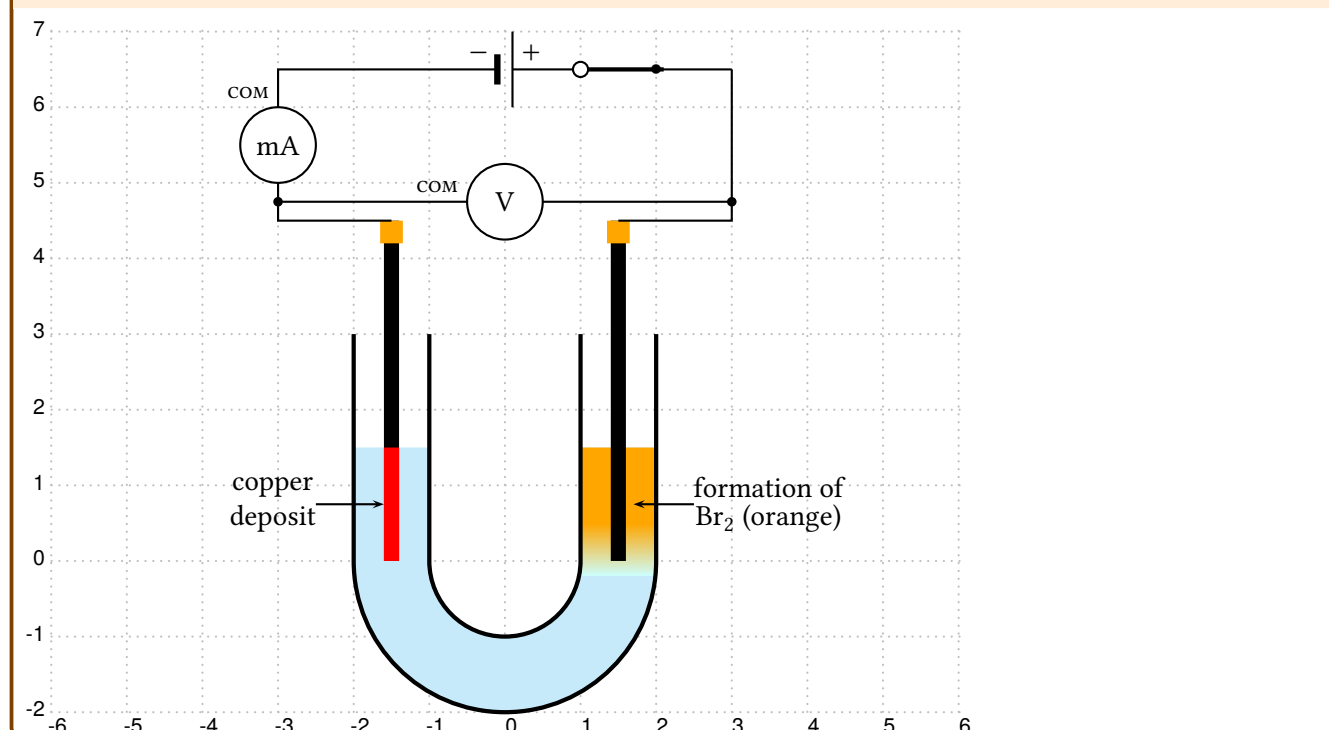
Parameter for PSTricks (open switch)

```
\psElectrolysisC[showgrid=b][{%
  \psline{<->}(-1.4,2)(1.4,2)
  \rput*(0,2){\shortstack{graphite\\ electrodes}}}%
  \psComment[ref=l]{-*}(2,-1.5)(0,-1.5){\shortstack{\small copper (II)\\bromide\\solution (II)}}%
}]{(-6,-2)(6,7)}
```



Parameter for PSTricks (closed switch)

```
\psElectrolysisD[showgrid=b][{%
\psComment[ref=l]{->}(2.5,0.75)(1.7,0.75){\shortstack{formation of\\  $\mathrm{Br}_2$  (orange)}}%
\psComment[ref=r]{->}(-2.5,0.75)(-1.6,0.75){\shortstack{copper\\ deposit}}}%
}]{-6,-2}(6,7)
```



References

- [1] Michel Goossens et al. *The L^AT_EX Graphics Companion: Illustrating Documents with T_EX and PostScript*. Tools and Techniques for Computer Typesetting. Berlin: Lehmanns Media, 2024, pp. xxi + 900.
- [2] Herbert Voß. *PSTricks – Grafik für T_EX und L^AT_EX*. 7th ed. Heidelberg and Berlin, 2016.
- [3] WIKIPEDIA. *Electrolysis*. URL: <https://en.wikipedia.org/wiki/Electrolysis> (visited on 06/10/2026).

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P

- \psElectrolysisA, 4f, 7
- \psElectrolysisB, 4ff, 8
- \psElectrolysisC, 9f, 12
- \psElectrolysisD, 9ff, 13