

**NAME**

**ecx** - library for electrochemistry

**SYNOPSIS**

**use** *ecx*

**DESCRIPTION**

*ecx* a Fortran library for providing a collection of routines for electrochemistry. A C API allows usage from C, or can be used as a basis for other wrappers. A Python wrapper allows easy usage from Python.

It covers:

**o kinetics**

Nernst, Butler-Volmer

**o electrochemical**

Impedance, Admittance, Circuit Elements, Equivalent Circuits

**o photoelectrochemistry**

Photocurrent, Band-gap, space charge.

The C API is defined by adding a prefix to the functions from the Fortran API due to the lack of module/namespace feature in the C language. The functions are therefore following this template: (c\_prefix)fortran\_func.

- (ecx\_)get\_version
- (ecx\_core\_)kTe
- (ecx\_eis\_)z
- mm
- (ecx\_kinetics\_)nernst
- (ecx\_kinetics\_)sbv
- (ecx\_kinetics\_)bv
- (ecx\_eis\_)z

**EXAMPLE**

Minimal example in Fortran:

```
use ecx
```

Minimal example in C:

```
include "ecx.h"
```

Minimal example in Python:

```
import pyecx
```

**SEE ALSO**

**complex(7), gsl(3), catanh(3), gnuplot(1)**