

## Types of Products Manufactured This Way

Electroplating is used in many industries for functional and/or decorative purposes. Some well known examples are chrome-plating of steel parts on automobiles. Steel bumpers become more corrosion-resistant when they have been electroplated with first nickel and then chromium

Electroplating can be used to silver plate copper or brass electrical connectors, since silver tarnishes much more slowly and has a higher conductivity than those metals.



Chrome plated Automobile Parts

## Resources

Place web resources and links you used for your information here:

- <http://iontechplating.com/images/>
- <http://www.rschrome.co.uk/whatis.html>
- <http://www.finishing.com/faqs/howworks.html>
- <http://www.rschrome.co.uk/whatis.html>
- <http://www.newworldencyclopedia.org/entry/Electroplating>

**QUESTIONS?  
COMMENTS?CONTACT:  
NOAH ZINSMEISTER**

31 Emory Avenue  
Cazenovia, NY 13035

Phone: 315.555.1370 ext 5230  
Fax: 315.555.1371  
E-mail: [noahwz@gmail.com](mailto:noahwz@gmail.com)



2010-2011

## Electroplating



Noah Zinsmeister



# ELECTROPLATING



*Satin Finished Musical Instrument*

## Types of Raw Materials for your process

**Cobalt** Is a good substitute for cadmium plating but not a direct replacement. Cobalt solution is a mixture of zinc and cobalt.

**Metal Polishing** Is the term used for metal polishing. Metals that can be polished include steel, brass, copper, stainless steel, aluminum, die-castings and cast iron.

**Satin Finishes** Are achieved by nickel plating then polished with a rough or smooth polishing compound to give a brushed effect.

## How the process works

**Electroplating** (often just called "plating") is the deposition of a metal coating onto an object.

A negative charge is induced on the object and it is placed into a solution which contains a metal salt. An electric current is run through the solution. The metal salt contains positively charged metal ions in solution, which are attracted to the negatively charged object and are "reduced" to metallic form upon it.

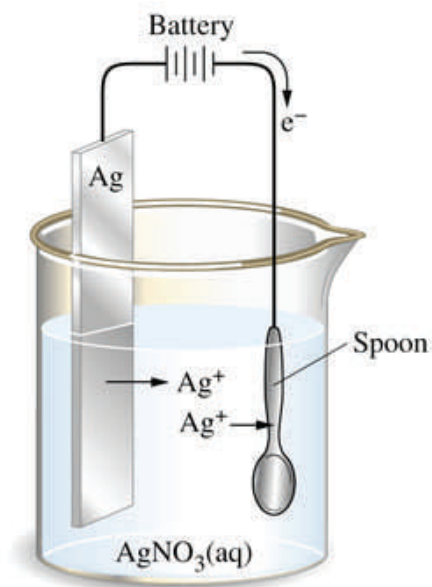
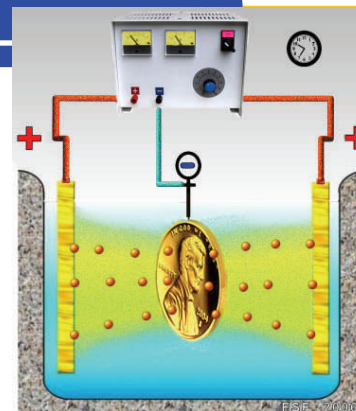


Diagram demonstrating an electroplat-



Electrolytic cell

The process used in electroplating is called **electrodeposition**.

Usually an electrolytic cell (consisting of two electrodes, electrolyte, and external source of current) is used for electrodeposition.

A major benefit of this approach over electroplating is that power sources and plating baths are not needed, reducing the cost of production. The technique can also plate diverse shapes and types of surface. The downside is that the plating process is usually slower and cannot create thick plates of metal.