Electric field inside the battery

How does a battery create an electric field inside a wire?
In books,it is not explained exactly how does the battery creates electric field inside the wire. A @trula explained,the battery creates an electric field between its terminals. But with nothing connected between the terminals (infinite impedance) this field cannot produce a current.

What is the direction of electric field inside a battery?
Outside the battery, in the conductor it is in the direction of conventional current. But what about inside?

Is the electric field inside a wire only?
Also,is that the electric field inside the wire only or is it present outside the wire as well?If the two ends of a length of uniform wire are connected to the terminals of a battery,the battery will pull electrons from one end of the wire and place them on the other end.

What is the E field inside a battery?
The E field inside a battery is the static E field such as that across a resistor in a battery circuit. A battery comprises opposing Em (internal E field) and Es (external E field)fields,resulting in a net zero E field in the battery. A wire of finite resistance can hold either Em,Es,or both. The total E field is just Em plusEs,algebraically summed.

What happens if a battery reaches a negative terminal?
When this occurs the potential difference across the terminals of the battery is constant and there is no further migration of positive charges within the battery. The consequences is that the electric fieldwithin a battery is directed from the positive terminal to the negative terminal.

What happens if a batterie has no wire?
if there is no wire you have an electric fieldbetween the poles of the batterie. If you connect the poles with a wire,a current will flow,driven by the electric field and the electric field is only inside the wire,outside you will have a magnetic field around the wire.

What is the direction of electric field inside a battery? Ask Question ... $begingroup$ Why do you think that the direction of the field between the anode and the ...

But if the battery voltage is ?V, then I can also write the following expression for the electric field inside the capacitor (assuming constant electric field): The voltage across the...

When battery terminals are connected to an initially uncharged capacitor, equal amounts of positive and negative charge, (+Q) and (-Q), are separated into its two plates. ... The dielectric reduces the electric field strength inside the ...

Electric field inside the battery

In a battery the field is chemically produced inside the structure of the object. Due to the form of most batteries, geometry makes it impossible to put the positive and the ...

Yes, there is an electric field around a disconnected cell -- an electrostatic field, just as if you ran a comb through your hair and p;laced it near an electroscope. In fact, one of ...

An electric fleld inside the battery builds up,pointingfromthe+terminaltothe¡terminal. ThisfleldopposesthemotionofH+ ions|theycannotcrosstothe+terminal,andthereactionstops. ...

In summary, the conversation discusses the concept of EMF in batteries and how it is related to the electric field inside the battery. The participants have different views on how ...

How does a battery create an electric field inside a wire? A battery contains two electrodes, one positively charged and one negatively charged. When connected to a wire, the ...

Describe (as specifically as possible) the electric field inside the conductor and the electric field at the surface of the conductor. Describe the distribution of charge in and on ...

The electric field inside a battery is created by the separation of charges between the positive and negative terminals. The positive terminal has an excess of positive ...

The migration of electric charges eventually stops when the forces produced by the electrochemical reaction are balanced by the forces due to the electric field within the ...

A @trula explained, the battery creates an electric field between its terminals. But with nothing connected between the terminals (infinite impedance) this field cannot ...

This electric field is created by a flow of electrons out of the metal with the smaller work function and into the metal with the larger work function. These electrons have flowed ...

Figure (PageIndex{10}): Electric field of a positively charged metal sphere. The electric field inside is zero, and the electric field outside is same as the electric field of a point charge at the ...

The first important thing that"s different: there is now an electric field across the electrolyte which allows a current to flow inside the battery (note that this diagram uses the ...

How does a battery create an electric field inside a wire? A battery contains two electrodes, one positively charged and one negatively charged. When connected to a wire, the electrons from the negative electrode ...

In terms of potential, the positive terminal is at a higher voltage than the negative terminal. Inside the battery,

both positive and negative charges move. ... Once we know the electric field ...

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