

# Technisches Englisch

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## Liquid-centred microbatteries

One way to get more **juice** out of a battery is to increase the **surface area** on which the **current-generating** reactions can **occur**. In a micro-battery, this can be done by **carving cavities** into a surface and **coating** the **resultant** 3D structure with an electrode material. The electrolyte and the other electrode can then be placed on top in the same way. But *Nathan Menachem*, an engineer specialising in microbatteries at Tel Aviv University in Israel, and **colleagues** say a simple modification to this design could make such 3D microbatteries **cheaper**. They **propose** making the 3D structure and coating it with an electrode material as before, but then filling the cavities with a **liquid** electrolyte. A second, **flat** electrode could then be easily placed on top of the **fluid to seal** the battery. This should make the battery cheaper to make, while **retaining** the surface area over which the current-generating reaction occurs.

*By courtesy of New Scientist*

**carve** schnitzen, einritzen, einschneiden  
**cavity** Kavität, Hohlraum, Aushöhlung  
**cheap, cheaper** günstig, günstiger  
**coat** überziehen  
**colleague** Kollege, Kollegin  
**current-generating** Strom erzeugend  
**flat** flach  
**fluid** Flüssigkeit; flüssig  
**juice** „Saft“, Strom  
**liquid** flüssig  
**occur** geschehen, auftreten, entstehen  
**propose** vorschlagen  
**resultant** resultierend, sich ergebend  
**retain** beibehalten, bewahren, erhalten  
**seal** versiegeln, (ab-)dichten, verschließen  
**surface area** Oberfläche

## Tricky Words

In this **issue** we will look at **tricky** words – words that can be easily **confused**. Please **choose** the correct word in each of the following sentences:

1. We must *check/control* the temperature regularly to make sure the system does not overheat.
2. The **failure** was *eventually/probably due to* a broken **relay**.
3. Every **defective** part must be *changed/exchanged* **immediately**.
4. When the temperature *rises/raises*, the system switches off automatically.
5. A *resistor/resistance* is a two-terminal electronic component designed to oppose an **electric current**.
6. In order to **prevent** heat from *escaping* through outside walls, these must be *sufficiently insulated/isolated*.
7. *Faults/Mistakes* in a circuit can lead to system failure.

**choose** auswählen, aussuchen  
**confuse** verwirren, durcheinander bringen  
**defective** fehlerhaft, unbrauchbar  
**due to** zurückführen auf, wegen  
**electric current** elektrischer Strom  
**escape** entkommen, entweichen  
**failure** Ausfall, Fehlfunktion  
**immediately** sofort  
**issue** Ausgabe, auch: Angelegenheit  
**prevent** verhindern, vermeiden  
**relay** Relais  
**solution** Lösung  
**sufficient/ly** ausreichend  
**tricky** heikel, verzwick

## A Bad Day ...

You think you are having a bad day? Read this.  
Fire **authorities** in California found a **corpse** in a burned out section of forest while **assessing** the **damage** done by a **forest** fire.  
The **deceased male** was dressed in a full **wetsuit, complete with scuba tanks** on his back, **flippers**, and face mask. A **post-mortem revealed** that the person died not from **burns**, but from massive **internal injuries**. **Dental records provided** a positive identification. **Investigators** then **set about** to **determine** how a **fully clad diver** ended up in the middle of a forest fire.  
It was revealed that on the day of the fire, the person went for a diving trip **off the**

**coast** some 20 miles from the forest. The firefighters, **seeking** to control the fire as quickly as possible, called in a **fleet** of helicopters with very large **dip buckets**. Water was dipped from the ocean and then **flown** to the forest fire and **emptied**. One minute our diver was making like Flipper in the Pacific, the next he was doing the **breast stroke** in a fire dip bucket 300 feet in the air. **Apparently** he **extinguished** exactly 5'10" of the fire.

*From the California Examiner*

**apparently** offenbar, augenscheinlich  
**assess** beurteilen, bewerten, abschätzen  
**authorities** Behörden, Amt  
**breast stroke** Brustschwimmen  
**burns** Verbrennungen  
**complete with** vollständig mit  
**corpse** Leiche  
**damage** Schaden  
**deceased male** männlicher Toter  
**dental records** zahnmedizinische Unterlagen  
**determine** feststellen, ermitteln, bestimmen  
**dip bucket** Tauchkübel, -eimer  
**diver; dive** Taucher; tauchen  
**empty** leeren; leer  
**extinguish** löschen  
**fleet** Flotte, Fuhrpark, Fahrzeugbestand  
**flippers** Schwimmflossen  
**fly, flow, flown** fliegen  
**forest** Wald  
**fully clad** vollständig bekleidet  
**internal injuries** innere Verletzungen  
**investigator** Ermittler  
**off the coast** vor der Küste  
**post-mortem** Obduktion  
**provide** liefern, erbringen  
**reveal** zum Vorschein bringen  
**scuba tank** Unterwasseratmergerät  
**seek** suchen, anstreben  
**set about** etwas angehen, sich daran machen  
**wetsuit** Taucheranzug, Neoprenanzug

*P. Zillmer*

**1. check** = überprüfen, nachsehen; control = steuern, regeln  
**2. probably** = eventuell, wahrscheinlich; eventually = schließlich, endlich  
**3. exchange** = austauschen; change = ändern, verändern  
**4. rise** = ansteigen; sich erhöhen; raise = erhöhen, anheben  
**5. resistor** (Batterie!); resistance = Widerstand als elektrische Größe/Maßeinheit  
**6. insulated** = (elektrisch) isoliert; isolated = getrennt, räumlich isoliert  
**7. fault** = techn. Fehler, Fehlfunktion; mistake = Fehler, der gemacht wird

Lösungen