GOOD RECOVERY
PAGE 777 The service life of lead-acid storage batteries used in vehicle starter motors and mobile base stations could be increased using a new recovery technique from researchers in Japan. Their combination of on-off constant current and large current discharge allows 80% of the original discharge times of degraded batteries to be recovered.

CRACKING DOWN
PAGE 792 A faster way to detect cracks in concrete has been developed by researchers in China. Using an L2 sparse representation classification technique, their method is much faster and just as accurate as the complex L1-based methods, and could help to decrease the cost of the visual inspection of civil infrastructures.

GOING THE DISTANCE
PAGE 774 The transmission distance of 25Gbit/s signals over multi-mode fibre for commercially available QSFP transceivers has been increased from 400 metres to several kilometres. A team from Poland and Germany combined a bare single-mode VCSEL with the receiver module of the QSFP transceiver, and achieved the significant increase without needing any other system changes.

FAST CLASSIFICATION
PAGE 756 Researchers from the US have proposed an enhanced multidimensional field embedding algorithm based on the force field formulation for hyperspectral image classification. By forming a new cost function, they greatly reduced the execution time and increased the classification accuracy over other methods with similar computational and memory demands.

HOVER BOARD STEERING
PAGE 748 Researchers in China have developed a mechanical steering structure and an improved control method of manned self-balanced-vehicles. By calculating the real-time inclination of the vehicle, the new steering mechanical structure only takes advantage of the change of the user’s centre of gravity, thus avoiding potential systemic risks due to redundant steering monitors.