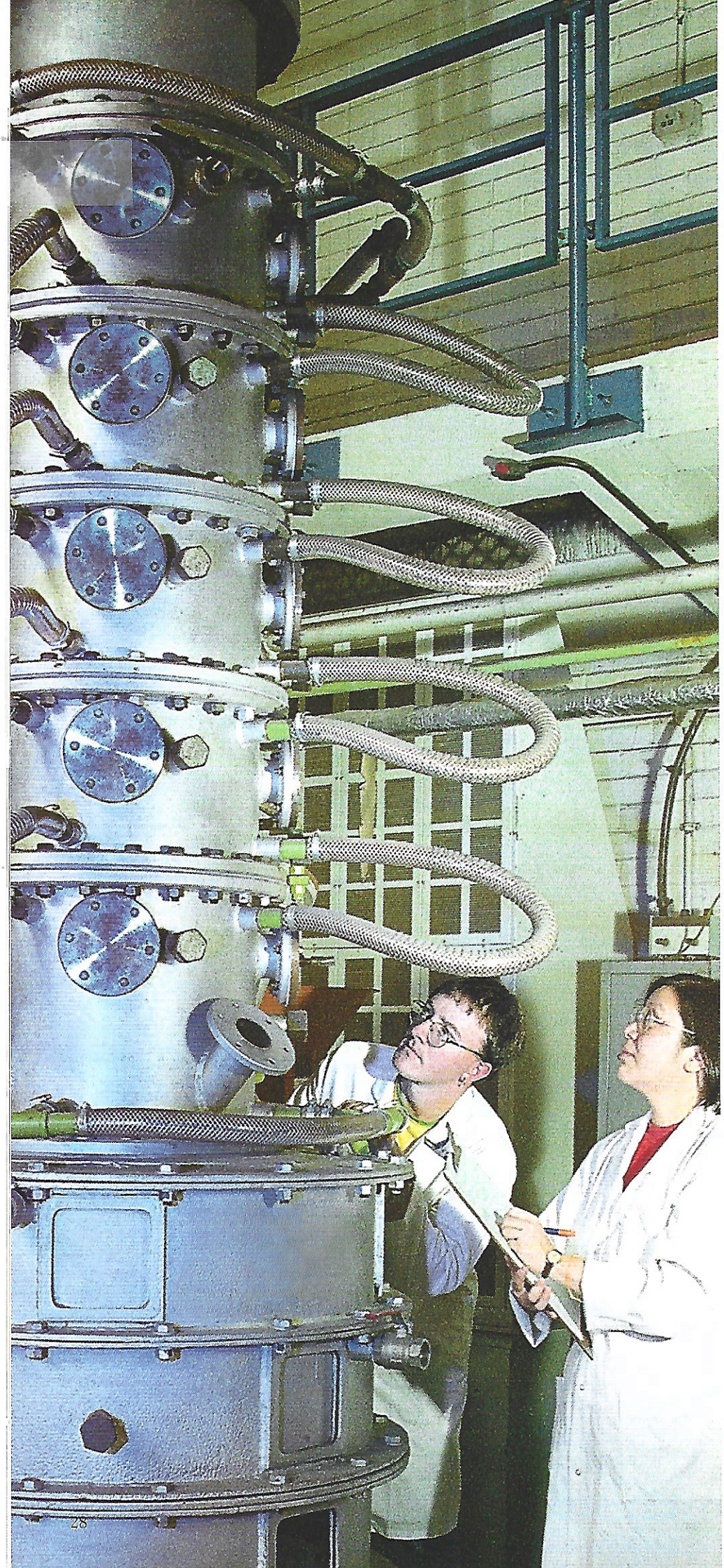

University of Sheffield

Environmental outreach to industry and government

Citation: *The University has an international reputation for its pioneering research into groundwater protection and energy production from waste materials, providing vital support for government and industry. Its pre-eminence in these fields is reinforced by work across a range of environmental concerns to promote sustainable development locally, nationally and internationally.*

In its environmental work, the Faculty of Engineering at the University of Sheffield specialises in two major areas of concern: the safe incineration of waste and the protection of valuable underground water supplies. These leading areas of research are part of the University's wider programme of environmental outreach, which includes an Environmental Businesses Network and a Waste Management Technology Centre – providing support to regional environmental activity and local businesses, especially SMEs – and an Environmental Consultancy Unit which coordinates the consultancy activities of fifteen University departments on a national and international basis.

The University has a worldwide reputation for converting scientific-engineering ideas into technological innovations in the field of clean waste incineration. It played a key role in developing one of the UK's first district heating systems, using heat generated by burning domestic and hospital waste. Since then its scientists have introduced industry-standard computer modelling software that is now used worldwide to design and optimise the performance of industrial plants. The University has also pioneered important new technologies for the environmentally-friendly incineration of municipal, clinical, industrial, sewage and hazardous waste. Its pre-eminent position has led to its designation as a UK centre for dioxin measurement, providing a vital service to industry and universities.

Over the last five years the University has established an internationally recognised centre for research into groundwater and contaminated land pollution. Its work covers a range of contaminants arising from diverse sources such as coking plants, chemical manufacturing facilities, petroleum spill sites, landfills and minewater discharges. A particular priority has been its research into when coal-tar pollutants will naturally attenuate and reduce groundwater pollution risks to acceptable levels, hence avoiding the need for expensive clean-up operations.