

transition is known as 'drying transition'. However for a hydrophobic surface consisting of small apolar molecules, water molecules can still reorganize near the hydrophobic surface without sacrificing their hydrogen bonds and as a result 'drying transition' cannot occur. The former is relevant to the solvation of macromolecules like proteins, whereas the latter is relevant to aqueous solvation of a butane or butanol molecule. The LCW theory may provide a better understanding of the phenomena of 'protein folding' and the stability of protein assemblies. Finally this paper by Hummer *et al.*⁵ is interesting not only to the field of biophysics,

but also to the field of both physics and chemistry.

For further reading please visit the following websites: <http://www.sciam.com/news/110801/1.html>; <http://www.nature.com/nature/links/011108/011108-4.html>; <http://gold.cchem.berkeley.edu/~susanne/>

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Nuclear Power: A Special Report *IEEE Spectrum* 38, 2001, **11**, 32–51.

Increasing power blackouts (possibly undependable future), supplies of oil, confirmed global warming contributed by (some) power generation technologies, have made people sit up and take a second look at a cleaner and abundant source of power, namely, nuclear power. With more and more operating experience, life time extensions of aged reactors are increasingly being sanctioned.

In the special report on 'Nuclear Power' cited here, there are eight articles. Four of these may be of universal interest and the rest are essentially US-centered. In 'Pragmatic concerns fuel nuclear support', Steve Miller discusses how the 'pendulum of public opinion' has swung over the past three decades. There is still no clear-cut, perceptible positive swing in US, thanks to concerns like thermal pollution, radioactive waste management, fears of core melt down and weaponization in other countries, etc. In the article 'Canned heat',

Glenn Zorpette states that 'consensus over a temporary fix has finally emerged in US, Europe and Japan (for dealing with radioactive waste)'. The solution is based on the technique known as 'dry-cask storage', although it is not a new approach. He concludes, however, 'no one really expects spent fuel to sit on those pads, monitored and guarded and with periodic changes of the cask, until it is twice as old as the Sphinx in Egypt is now. But it is probably just as well as that the casks can apparently hold the waste for a century or more'. Then the article 'Extending life by half' by David P. Amber, deals with the process of some dozen or more 40-year-old nuclear power plants in US getting a fresh lease of their licenses for another 20 years or more, by taking care of age-related safety and other problems. The September 11 terrorist attack has led to focusing attention on protecting nuclear plants and waste from terrorist 'repurposing' in the article, 'Unconventional nuclear weapons'. The Special Report skirts several issues dealing with nuclear technologies being

pushed in several countries, other than USA.

Male mate choice selects for female colouration in a fish: By Trond Amundsen and Elisabet Forsgren
Proc. Natl. Acad. Sci. USA, 2001, **98**, 13155–13160.

Sexual selection has proved successful in explaining a wide variety of male ornaments. It has been known traditionally that female ornaments are considered non-functional. In this paper, the authors have carried out two experiments to test whether males preferred to mate with more colourful females. In the first experiment (two-spotted gobies (*Gobisculus flavescens*)) female species with natural colouration and in the second experiment females with a manipulated belly colouration were introduced. It was found that males preferred to spend more time with coloured females than the naturally coloured ones, leading thereby to the conclusion that female ornaments are sexually selected.