

over the surface of the cleft between the two lobes (Fig. 1a, shown in red) and in doing so traverses the entire protein substrate binding groove as well as occupying a substantial region of the ATP-binding site as it wedges between the two lobes. Inspection of the contacts between the C-terminal residues and the catalytic core reveals 47 hydrogen bonds ($<3.5 \text{ \AA}$) and 351 van der Waals contacts ($<4 \text{ \AA}$). A number of contacts mimic those expected for peptide substrate side-chain recognition sites, others involve residues in the ATP-binding glycine-rich loop and residues involved in catalysis conserved in all protein kinases^{7,14} (Fig. 2).

The twitchin kinase structure provides compelling evidence of the intrasteric model of protein kinase regulation with the autoregulatory sequence exploiting multiple features of the enzyme's active site to inhibit enzyme activity; indeed it mirrors the active site and is more than a simple pseudosubstrate. Preliminary work suggests the mechanism revealed here will be shared by all members of the MLCK and calmodulin-dependent protein kinase II subfamilies and possibly other enzymes. □

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CORRECTIONS

The shape, expansion rate and distance of supernova 1993J from VLBI measurements

N. Bartel, M. F. Bietenholz, M. P. Rupen, J. E. Conway, A. J. Beasley, R. A. Sramek, J. D. Romney, M. A. Titus, D. A. Graham, V. I. Altunin, D. L. Jones, A. Rius, T. Venturi, G. Umama, R. L. Francis, M. L. McCall, M. G. Richer, C. C. Stevenson, K. W. Weiler, S. D. Van Dyk, N. Panagia, W. H. Cannon, J. Popelar & R. J. Davis

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IN this letter some of the references were incorrectly numbered (details available from the first author). □

Water-based non-stick hydrophobic coatings

Donald L. Schmidt, Charles E. Coburn, Benjamin M. DeKoven, Gregg E. Potter, Gregory F. Meyers & Daniel A. Fischer

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THE chemical nomenclature used for monomer A in this letter should have been correctly given as 2-(perfluorooctyl)ethyl methacrylate (recommended common name) or 1-decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10 - heptadecafluoro - methacrylate (*Chemical Abstracts* complete name). □