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Send-off for a New Journal

The field of enzymatic catalysis is experiencing a renaissance. This revival has been brought about by four major scientific breakthroughs over the last decade or so. These are (i) *protein engineering*, which allows one to re-design enzyme molecules by means of site-directed mutagenesis and thus, once the structure-function relationship is sufficiently understood, to alter enzymatic properties at will, (ii) *catalytic antibodies*, which afford novel enzyme-like protein catalysts with tailor-made selectivities; (iii) *ribozymes*, which expand the phenomenon of biocatalysis to non-protein macromolecules, ribonucleic acids, and perhaps beyond; and (iv) *nonaqueous enzymology*, which not only enables the use of enzymes in organic solvents containing little or no water, where heretofore impossible reactions occur readily, but also provides for the control of enzymatic properties by the solvent.

I believe that such exciting developments more than justify Elsevier's decision to spin off the section of Biochemical Catalysis into a separate entity; *Journal of Molecular Catalysis B: Enzymatic*. This way, rather than being almost a poor cousin to its more mature chemical counterpart, enzymatic catalysis will have a chance to stand and, hopefully, shine on its own. In addition to the exploration of the aforementioned novel technologies, there are emerging unmet needs amenable to enzymatic catalysis. The most striking example of such a need is in the production of chiral compounds, particularly for single-enantiomer pharmaceuticals. According to Stinson's article in *Chemical Engineering News* last year, the 1993 worldwide market for chiral drugs was some US $ 35 billion and could reach US $ 60 billion by 1997. It is quite clear that in the future most, if not all, chiral drugs will be in the form of individual bioactive enantiomers (instead of racemic mixtures). Furthermore this future has begun – more than a third of the 100 best-selling pharmaceuticals in the United States last year were single-enantiomer drugs approved since 1990. Enzymes have a tremendous opportunity to become an important player among the methods used to meet this demand.

As with any other journal, the success of this one will depend on its ability to attract high-quality papers. Therefore the Editors are to be encouraged to emphasize excellence and innovation as the primary criteria in accepting manuscripts, whether they deal with fundamental or applied aspects of enzymatic catalysis, and whether the focus is on mechanisms or enzyme-based process development. If the optimists among us are right and the best in enzymatic catalysis is indeed yet to come, then the Editors should never run out of good papers to publish.

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