A Study on Design and Synthesis of New Lubricant for Near Contact Recording

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As hard-disk drives require higher recording density and reliability, the technology of the head-disk interface (HDI) is facing more challenging tasks regarding its tribological performance. In the phase of near contact recording, the conventional lubricants would cause several issues due to their limited chemical structures. In this study, a new fluorinated lubricant (LTA-30) for near contact recording has been developed. By virtue of its flexibility in structural design, LTA-30 has desirable properties in chemical stability, friction force, and adhesion.

Index Terms—**Friction force, hard disk, head-disk interface, lubricant.**