Abstract Submitted
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Carbon Coated Tellurium Film for Optical Data Storage JONATHAN ABBOTT, Brigham Young University, TRAVIS NIEDERHAUSER, ERIK BARD, MIKE MILLER, Millenniata, Inc., MARK WORTHINGTON, CD Associates, DOUG HANSEN, Millenniata, Inc., GUILIN JIANG, ROBERT DAVIS, RICHARD VANFLEET, MATTHEW LINFORD, Brigham Young University — A highly durable optical disk has been developed for data archiving. This optical disk uses tellurium as the write layer and carbon as a dielectric and oxidation prevention layer. The sandwich style CTeC film was deposited on polycarbonate and silicon substrates by plasma sputtering. These films were then characterized with SEM, TEM, EELS, ellipsometry, ToF-SIMS, etc, and were tested for writability and stability. Results show the films were uniform in physical structure, able to form pits, and promise longer lifetimes than currently available media. Data was written to a disk and successfully read back in a commercial DVD drive.

Jonathan Abbott
Brigham Young University

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