observed spacing of interference fringes varies upon rotation of the nanoslit. It is shown that the fringes are formed due to the interference between the SPP generated by the nanoslit and the in-plane component of the incident laser beam, different than the mechanism reported in [20]. The nature of this interference pattern adds complexity to the s-NSOM images and needs to be taken into account in the interpretation of s-NSOM measurements, especially those of plasmonic nanostructures.

Acknowledgments

Supports to this work by the Defense Advanced Research Projects Agency (Grant No. N66001-08-1-2037), the National Science Foundation (Grant No. CMMI-1120577), and ASTC- the Advanced Storage Technology Consortium are gratefully acknowledged.