NEAR INFRARED LASER SPECTROSCOPY OF VS

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VS has been produced in a supersonic free jet expansion in argon by the reaction of laser ablated vanadium atoms and carbon disulfide. High resolution laser induced fluorescence (LIF) spectra between 729.7 and 847.1 nm have been obtained using a c.w. single frequency Ti: sapphire ring laser. A number of bands have been recorded and assigned to the $C\,^4\Sigma^- - X\,^4\Sigma^-$ system. The hyperfine structure caused by ^{51}V nucleus (I = 7/2) is mostly resolved. All 24 branches expected from a $^4\Sigma - ^4\Sigma$ transition have been observed and assigned. This work represents the first experimental investigation of the electronic spectra of VS.

Acknowledgement: This work was carried out with support from the Hong Kong Research Grant Council under Grant HKU 503/96P.