# "INFLUENCE OF UP-CONVERSION EMISSION ON LASING CHARACTERISTICS OF MICRO-SPHERE LASERS BASED ON HIGH-CONCENTRATION ERBIUM-DOPED SILICA-ALUMINA GLASSES "

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TÓM TẮT:

We report new experimental resuls of migration and up-conversion process in the high-concentration Erbium-doped silic-alumina glasses. The experiment shows that under 976nm excitation, the intense of up- conversion emission at 523, 546 and 657nm, corresponding to the transition 2H11/24I15/2, 4S3/24I15/2 and 4F9/24I15/2, respectively, depend on the erbium content, migration of excitation and pump power. The migration of excitation and up-conversion process in the highly Er-doped glasses was verified by increase of threshold and red shift of laser emission wavelength at threshold of micro-spherical cavity lasers made by silica –alumina glasses with different contents of Er-ions. This result is promising for making green light laser from erbium-doped glases.