Accepted Manuscript

$Pb_8M(BO_3)_6$ (M□=□Mg, Ca): Two new borates with large birefringence activated by $_\infty[Pb_8B_6O_{18}]^{2-}$ double layers

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PII: S0925-8388(18)30735-7

DOI: 10.1016/j.jallcom.2018.02.246

Reference: JALCOM 45122

To appear in: *Journal of Alloys and Compounds*

Received Date: 29 November 2017

Revised Date: 23 January 2018

Accepted Date: 19 February 2018

Please cite this article as: C. Zhou, H. Zhang, J. Cheng, H. Li, S. Beysen, $Pb_8M(BO_3)_6$ (M□=□Mg, Ca): Two new borates with large birefringence activated by the $_\infty[Pb_8B_6O_{18}]^{2-}$ double layers, *Journal of Alloys and Compounds* (2018), doi: 10.1016/j.jallcom.2018.02.246.

The substitution strategy based on theory of acid and alkali was adopted and we successfully designed $Pb_8Mg(BO_3)_6$ and $Pb_8Ca(BO_3)_6$ with calculated birefringence equal to 0.12 and 0.15@1064 nm, respectively.