(51) **Int. Cl.**

H01L 29/15	(2006.01)
H01L 31/036	(2006.01)
H01L 27/12	(2006.01)
H01L 29/417	(2006.01)
H01L 29/423	(2006.01)
H01L 29/786	(2006.01)
H01L 29/66	(2006.01)
H01L 29/788	(2006.01)

(52) **U.S. Cl.**
CPC .. ***H01L 29/41733*** (2013.01); ***H01L 29/42384*** (2013.01); ***H01L 29/66742*** (2013.01); ***H01L 29/788*** (2013.01); ***H01L 29/78606*** (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2008/0002087	A1*	1/2008	Kim	G02F 1/136286 349/46
2010/0065818	A1*	3/2010	Kim	B82Y 10/00 257/14
2014/0160419	A1*	6/2014	Lee	G02F 1/1341 349/154
2015/0123126	A1	5/2015	Yamazaki et al.	
2016/0190330	A1*	6/2016	Yamazaki	H01L 29/7869 257/43

FOREIGN PATENT DOCUMENTS

JP	5151122	12/2012
JP	2013236072	11/2013
KR	101275710	6/2013

* cited by examiner