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25944	7590	09/28/2021	EXAMINER	
OLIFF PLC			MERSHON, JAYNE L	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* TAKENORI WATABE, RYO MITTA, HIROSHI HASHIGAMI,  
and HIROYUKI OHTSUKA

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Appeal 2020-005979  
Application 15/753,630  
Technology Center 1700

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Before BEVERLY A. FRANKLIN, BRIAN D. RANGE, and DEBRA L.  
DENNETT, *Administrative Patent Judges*.

FRANKLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the  
Examiner's decision to reject claims 24–34. We have jurisdiction under  
35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R.  
§ 1.42(a). Appellant identifies the real party in interest as SHIN-ETSU  
HANDOTAI CO., LTD. Appeal Br. 1.

### CLAIMED SUBJECT MATTER

Claim 24 is illustrative of Appellant's subject matter on appeal and is set forth below:

24. A solar cell comprising:  
a semiconductor substrate of a first conductivity type;  
a base layer of the first conductivity type, having a dopant concentration higher than in the semiconductor substrate, and an emitter layer of a second conductivity type which is an opposite conductivity type to the first conductivity type, each of the layer being provided on a first main surface of the substrate;  
a dielectric film provided on the base layer and the emitter layer;  
a base electrode electrically connected with the base layer;  
and  
an emitter electrode electrically connected with the emitter layer;  
wherein, a surface of the semiconductor substrate is provided with unevenness formed at least at the contact interface between the base electrode and the base layer;  
the first main surface has a recess in a pattern, with the surface of the recess being flat, and the emitter layer is formed on the surface of the recess; and  
flatness of the recess is less than 1  $\mu\text{m}$  in a PV value.

### REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Sinton	US 5,053,083	Oct. 1, 1991
Moslehi	US 2010/0300518 A1	Dec. 2, 2010
Wang	US 8,574,951 B1	Nov. 5, 2013

### REJECTIONS

1. Claims 24, 28, and 32–34 are rejected under 35 U.S.C. § 103 as being unpatentable over Wang. Ans. 4.
2. Claims 25 and 29 are rejected under 35 U.S.C. § 103 as being unpatentable over Wang as applied to claim 24 above, and further in view of Moslehi. Ans. 6.
3. Claims 26, 27, 30, and 31 are rejected under 35 U.S.C. § 103 as being unpatentable over Wang as applied to claim 24 above, and claims 27 and 31 are rejected under 35 U.S.C. § 103 as being unpatentable over Wang in view of Moslehi as applied to claim 25 above, and further in view of Sinton. Ans. 8.

### OPINION

We review the appealed rejections for error based upon the issues Appellant identifies, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”). Upon review of the evidence and each of the respective positions set forth in the record, we find that Appellant identifies error in the Examiner’s rejection. Accordingly, we reverse each of the Examiner’s rejections on appeal.

Rejection 1

The Examiner relies upon an inherency theory in making the rejection. Ans. 5. Therein, the Examiner states:

Wang does not disclose wherein the flatness of the recess is less than 1 um in PV value, wherein PV value defined by applicant's specification is the difference between the maximum and the minimum displacement (see applicant's disclosure paragraph [0071], page 23).

Wang does disclose a substantially identical method in the identical structure, i.e. in a polycrystalline or monocrystalline (single crystalline) silicon substrate (see col. 4, lines 26-28), after the texture (i.e. micro-structure, unevenness) is formed, utilizing a mask, followed by etching the trench to form the recess, diffusing the dopant for the emitter (see Wang col. 2, line 64 through col. 3, line 49 and claim 1).

The court has held when the structure recited in the reference is substantially identical to that of the claims, claimed properties of functions are presumed to be inherent.

For the reasons presented on pages 8–13 of the Appeal Brief, Appellant submits that the Examiner's inherency theory is unsupported. Appellant reiterates this position on pages 2–9 of the Reply Brief. Therein, Appellant convincingly explains how the methodology described in the Specification differs from Wang's methodology. Reply Br. 6. On the other hand, the Examiner's position does not adequately direct us to same methodology in support of an inherency theory. *See Ans. passim*. This point is persuasively made by Appellant on pages 5–8 of the Reply Brief. We note that “[t]o establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing

described in the reference, and that it would be so recognized by persons of ordinary skill.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citing *Continental Can Co v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)).

In view of the above, we reverse Rejection 1.

### Rejections 2 and 3

We reverse Rejections 2 and 3 for the same reasons provided with regard to Rejection 1.

## CONCLUSION

We reverse the Examiner’s decision.

## DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
24, 28, 32–34	103	Wang		24, 28, 32–34
25, 29	103	Wang, Moslehi		25, 29
26, 27, 30, 31	103	Wang, Moslehi, Sinton		26, 27, 30, 31
<b>Overall Outcome</b>				24–34

REVERSED