

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte CHENGJIU WU and JIANHUI SHAN

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Appeal No. 1998-2334  
Application No. 08/348,385

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ON BRIEF

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Before GARRIS, LIEBERMAN, and SMITH, JEFFREY, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 1-28. The only other claims in the application, which are claims 29 and 30, have been allowed.

The subject matter on appeal relates to a method for preparing unsymmetrical 2,7-disubstituted fluoren-9-one derivatives. This appealed subject matter is adequately

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illustrated by independent claim 1, a copy of which taken from the appellants' brief is appended to this decision.

The reference set forth below is applied by the examiner in the section 102 rejection before us:

Wu et al. (Wu)	5,354,511	Oct. 11, 1994
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All of the appealed claims stand rejected under 35 U.S.C. § 102(e) as being anticipated by Wu.<sup>1</sup>

We refer to the brief and reply brief and to the answer for a complete exposition of the opposing viewpoints expressed by the appellants and by the examiner concerning the above noted rejection.

#### OPINION

We will sustain this rejection for the reasons set forth in the answer and below.

The examiner regards the here claimed method as being clearly anticipated by the Wu patent. The appellants' contrary viewpoint is most succinctly expressed in the last

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<sup>1</sup> The appealed claims will stand or fall together; see page 5 of the brief and page 3 of the answer as well as 37 CFR § 1.192(c)(7)(8)(July 1996). Accordingly, in resolving the issues before us on this appeal, we need focus only on claim 1 which is the broadest independent claim on appeal.

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full paragraph on page 2 of the reply brief which reads as follows:

U.S. Patent 5,354,511 produces a compound analogous to C by a method involving an organic transformation reaction followed by an alkylation. The closest that the '511 patent comes to the present invention is an intermediate step shown bridging columns 5 and 6 where the patentee uses a nucleophilic reagent of the formula D-Z(i.e. NaSH) in the presence of an aprotic solvent(i.e. DMF), but they do not produce a compound according to the formula C of this invention because under no circumstances do the A/D linkages of this invention form a compound having H<sub>2</sub>N and SH linkages as shown by the '511 patent at column 5-6. In order to attain a compound according to formula C of this invention with the proper A/D linkages, the patentee must then react their intermediate with CH<sub>3</sub>I (see the bottom of column 6). Applicant's method does not react an intermediate with CH<sub>3</sub>I.

We do not consider the appellants' position to be well taken for a number of reasons. In the first place, as correctly noted by the examiner in the answer, the appealed claim 1 term, "comprising" permits the inclusion of other steps in the appellants' claimed method. In re Baxter, 656 F.2d 679, 686, 210 USPQ 795, 802 (CCPA 1981). In addition, we perceive no recitation in appealed claim 1, and the appellants point to none, which excludes from the here claimed method the reaction disclosed by Wu at the bottom of column 6 between patentee's intermediate and CH<sub>3</sub>I. On the other hand, pages

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14-16 of the subject specification plainly disclose that the substitution reaction of the appellants' invention may include both leaving groups, rather than just one leaving group, whereby both the A and A' groups in the precursor compound D may be sequentially replaced. Indeed, the reaction scheme shown at the top portion of specification page 16 is very similar to the reaction scheme shown by Wu at the bottom of columns 5 and 6 including the specification page 16 reaction of an intermediate with  $R_fI$  and patentee's bottom most reaction in column 6 of an intermediate with  $CH_3I$ .

It is axiomatic that, in proceedings before the Patent and Trademark Office, claims in an application are to be given their broadest reasonable interpretation consistent with the specification and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). When so interpreted, appealed claim 1 encompasses intermediate reactions in forming a compound of the formula C for the reasons discussed above including especially the appellants' disclosure of intermediate reactions at specification pages 14-16. As a consequence, we cannot agree with the appellants' above quoted

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contention that their "method [i.e., the method defined by  
appealed independent claim 1] does not react an intermediate  
with CH<sub>3</sub>I."

It follows that we will sustain the examiner's section  
102 rejection of claims 1-28 as being anticipated by Wu.

The decision of the examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

	Bradley R. Garris	)	
	Administrative Patent Judge	)	
		)	
		)	
	Paul Lieberman	)	BOARD OF
PATENT	Administrative Patent Judge	)	APPEALS AND
		)	INTERFERENCES
		)	
	Jeffrey T. Smith	)	)
	Administrative Patent Judge	)	

BRG:tdl

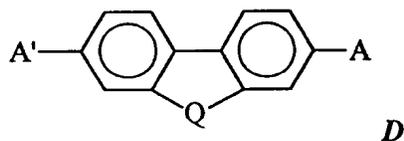
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APPENDIX

1. A method for preparing unsymmetrical 2,7-disubstituted fluoren-9-one derivatives, said method comprising:

reacting a compound of the formula *D*:

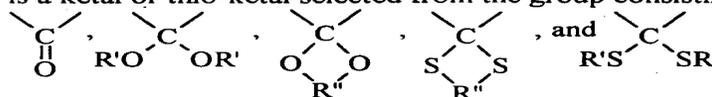


wherein

*A'* is the same as or different from *A*, and is a leaving group selected from the group consisting of -Br, -Cl, -F, -NO<sub>2</sub>, and -CN;



is a carbonyl or a protected carbonyl wherein said carbonyl is a ketal or thio-ketal selected from the group consisting of



wherein

R' is  $-C_rH_{2r+1}$ ;

R'' is  $-(CH_2)_r$ ; and

r is independently an integer of 2 or 3;

A is an electron accepting group selected from the group consisting of  $-NO_2$ ,  $-CN$ ,  $-CO_2R$ ,  $-C(O)R$ ,  $-SO_2R$ ,

$-SO_2R_F$ ,  $-C(CN)=C(CN)_2$  and  $-CH=C(CN)_2$ ;

R<sub>F</sub> is  $-C_pF_{2p+1}$ ;

p is an integer of from about 1 to about 10;

R is selected from the group consisting of phenyl, naphthyl, and a straight, branched and cyclic aliphatic alkyl group having from about 1 to about 10 carbon atoms;

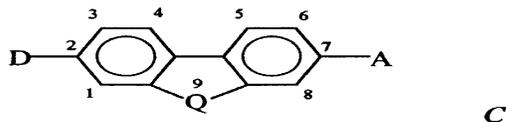
with a nucleophilic reagent of the formula D-Z

wherein D is an electron donating group selected from the group consisting of

$-NH_2$ ,  $-NHR$ ,  $-NR_2$ ,  $-OH$ ,  $-OR$ ,  $-SH$ , and  $-SR$ , and

Z is a metal cation,

in the presence of an aprotic solvent and under conditions sufficient to form a compound of the formula C



wherein

A is as previously defined in formula D;

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**D** is an electron donating group selected from the group consisting of -NH<sub>2</sub>, -NHR, -NR<sub>2</sub>, -OH, -OR, -SH, and -SR;



**R** is as previously defined in set A of formula *D*; and  
is as previously defined in formula *D*.