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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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VIZIO, INC.,

Petitioner,

v.

NICHIA CORPORATION,

Patent Owner.  
-----

Case No. IPR2018-00437

Patent 9,537,071

DEPOSITION OF STANLEY R. SHANFIELD, Ph.D.

East Palo Alto, California

Wednesday, December 19, 2018

1:01 p.m.

Job No.: 221516

Pages: 1 - 99

Reported By: Charlotte Lacey, RPR, CSR No. 14224

**NICHIA EXHIBIT 2033**  
*Vizio, Inc. v. Nichia Corp.*  
Case No. IPR2018-00437

1 DEPOSITION OF STANLEY R. SHANFIELD, Ph.D., held at  
2 the offices of ROPES & GRAY LLP, 1900 University Avenue,  
3 6th Floor, East Palo Alto, California

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7 Pursuant to notice, before Charlotte Lacey,  
8 Certified Shorthand Reporter, in and for the State of  
9 California.

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A P P E A R A N C E S

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I N D E X

WITNESS	PAGE
STANLEY R. SHANFIELD, Ph.D.	
Examination by Mr. Jones	5

I N D E X O F E X H I B I T S

EXHIBITS	DESCRIPTION	PAGE
Exhibit S8	Copy of Exhibit 1030, U.S. Patent No. 6,770,498 B2	72
Exhibit S9	Colored version of figure 12 from Exhibit 1030, U.S. Patent No. 6,770,498 B2	76

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P R O C E E D I N G S

STANLEY R. SHANFIELD, Ph.D.,

the witness herein, having been first duly sworn, was  
examined and testified as follows:

EXAMINATION

BY MR. JONES:

Q Good afternoon, Dr. Shanfield.

A Good afternoon.

Q And you understand that you are still under  
oath?

A Yes.

Q And the instructions I gave you earlier  
regarding how a deposition works, those still apply.  
You understand?

A Yes. Thanks.

Q Okay. You have some documents in front of  
you?

A Same ones as before, my -- the two patents,  
the '411, the '071, my recent declaration 1017, and my  
old declaration 1003.

Q Okay. And those are unmarked?

A Right.

Q Okay. Just so we don't get confused, you can  
set the previous S exhibits we've used aside.

Okay. If I refer to the fifth embodiment of

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