

## Accepted Manuscript

Reconstruction for limited-data nonlinear tomographic absorption spectroscopy via deep learning

Jianqing Huang , Hecong Liu , Jinghang Dai , Weiwei Cai

PII: S0022-4073(18)30280-2  
DOI: [10.1016/j.jqsrt.2018.07.011](https://doi.org/10.1016/j.jqsrt.2018.07.011)  
Reference: JQSRT 6160



To appear in: *Journal of Quantitative Spectroscopy & Radiative Transfer*

Received date: 23 April 2018  
Revised date: 26 June 2018  
Accepted date: 15 July 2018

Please cite this article as: Jianqing Huang , Hecong Liu , Jinghang Dai , Weiwei Cai , Reconstruction for limited-data nonlinear tomographic absorption spectroscopy via deep learning, *Journal of Quantitative Spectroscopy & Radiative Transfer* (2018), doi: [10.1016/j.jqsrt.2018.07.011](https://doi.org/10.1016/j.jqsrt.2018.07.011)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Highlights

- A new inversion method based on convolutional neural networks for nonlinear tomographic absorption spectroscopy is demonstrated.
- The effects of network parameters on the performance of neural networks are investigated.
- Comparison between CNN and SA is investigated and CNN shows better noise immunity and higher computational efficiency.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/7845794>

Download Persian Version:

<https://daneshyari.com/article/7845794>

[Daneshyari.com](https://daneshyari.com)