

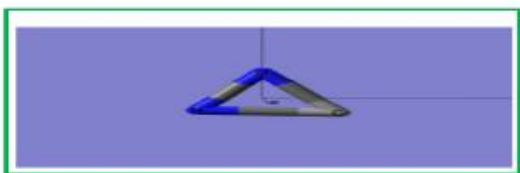


# Journal of Applicable Chemistry

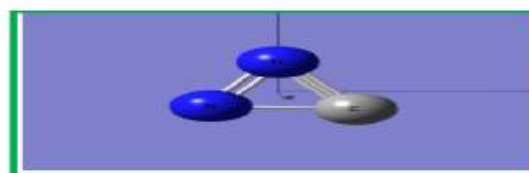
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(International Peer Reviewed Journal)



## New Chemistry News



New News of Chem (NNC)



ChemNewsNew (CNN)

## CNN-38

### Capsule Net -Ref. 01

| <b>Hinton et.al. CapsuleNets</b> |  |
|----------------------------------|--|
| 01                               | <a href="#">Dynamic Routing Between Capsules</a><br>Sara Sabour Nicholas Frosst, <b>Geoffrey E. Hinton</b><br>arXiv preprint arXiv:1710.09829, 2017; Citations: 2334   |
| 02                               | <a href="#">Matrix capsules with EM routing</a><br><b>Geoffrey Hinton</b> , Sara Sabour, Nicholas Frosst<br>ICLR 2018 Conference (modified: 07 Mar 2018), Citations: 470   |
| 03                               | <a href="#">Capsule graph neural network</a><br>Zhang Xinyi, Lihui Chen<br>conference paper at ICLR 2019 (modified: 09 Mar 2019)   |
| 04                               | <a href="#">Stacked Capsule Autoencoders</a><br>Adam R. Kosiorek, Sara Sabour, Yee Whye Teh, <b>Geoffrey E. Hinton</b><br>arXiv:1906.06818v2 [stat.ML] 2 Dec 2019  |
| 05                               | <a href="#">Canonical Capsules: Unsupervised Capsules in Canonical Pose</a><br>Weiwei Sun, nhpn Andrea Tagliasacch, Boyang Deng, Sara Sabour,<br>Soroosh Yazdani, <b>Geoffrey Hinton</b> , Kwang Moo Yi<br>arXiv:2012.04718v1 [cs.CV] 8 Dec 2020 |

| <b>Advances. CapsuleNets</b> |   |
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| 06                           | <a href="#">Geometric Capsule Autoencoders for 3D Point Clouds</a><br>Nitish Srivastava, Hanlin Goh, Ruslan Salakhutdinov<br>arXiv:1912.03310v1 [cs.LG] 6 Dec 2019  |
| 07                           | <a href="#">The Multi-Lane Capsule Network (MLCN)</a><br>Vanderson M. do Rosario, Edson Borin, and Mauricio Breternitz<br>arXiv:1902.08431v1 [cs.CV] 22 Feb 2019  |
| 08                           | <a href="#">SubSpace Capsule Network</a><br>Marzieh Edraki, Nazanin Rahnavard, Mubarak Shah1<br>The Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20) 2020, Association for the Advancement of Artificial Intelligence ( <a href="http://www.aaai.org">www.aaai.org</a> ). |
| 09                           | <a href="#">Capsule graph neural network</a><br>Zhang Xinyi, Lihui Chen<br>ICLR 2019  |
| 10                           | <a href="#">Spectral capsule networks</a><br>Mohammad Taha Bahadori, Amazon Web Services<br>Workshop track - ICLR 2018  |
| 11                           | <a href="#">Capsule Networks—A Probabilistic Perspective</a><br>Lewis Smith, Lisa Schut, Yarin Gal, Mark van der Wilk<br>arXiv: 2004.03553v3 [cs.LG] 6 Jan 2021   |
| 12                           | <a href="#">Capsule GAN Using Capsule Network for Generator Architecture</a><br>Kanakano Marusaki and Hiroshi Watanabe<br>arXiv:2003.08047v1;18 Mar 2020  |
| 13                           | <a href="#">SA-CapsGAN: Using Capsule Networks with embedded self-attention for Generative Adversarial Network</a><br>Guangcong Sun, Shifei Ding, Tongfeng Sun, Chenglong Zhang<br>Neurocomputing 423 (2021) 399–406<br>doi.org/10.1016/j.neucom.2020.10.092                                |

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| 14 | <a href="#">Capsule Networks – A survey</a><br>Mensah Kwabena Patrick, Adebayo Felix Adekoya, AyidzoeAbra Mighty, Baagyire Y. Edward<br>Journal of King Saud University – Computer and Information Sciences xxx (2020) xxx<br>doi.org/10.1016/j.jksuci.2019.09.014                                    |
| 15 | <a href="#">Capsule Network Performance on Complex Data</a><br>Edgar Xi, Selina Bing, Yang Jin<br>arXiv:1712.03480v1 [stat.ML] 10 Dec 2017  |
| 16 | <a href="#">Comparative study of capsule neural network in various applications</a><br>T. Vijayakumar,<br>J Artificial Intelligence and Capsule Networks (2019), Vol.01/ No. 01Pages: 19-27<br>DOI: <a href="https://doi.org/10.36548/jaicn.2019.1.003">https://doi.org/10.36548/jaicn.2019.1.003</a> |

## Medical Diagnosis. CapsuleNets

### carcinoma CapsuleNets

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| 17 | <p>Capsule network based analysis of histopathological images of oral squamous cell carcinoma</p> <p>SantisudhaPanigrahi, Jayshankar Das, TriptiSwarnkar</p> <p>Journal of King Saud University – Computer and Information Sciences xxx (xxxx) xxx</p> <p>doi.org/10.1016/j.jksuci.2020.11.003</p> |
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### COVID-19 CapsuleNets

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| 18 | <p>Convolutional CapsNet: A novel artificial neural network approach to detect COVID-19 disease from X-ray images using capsule networks</p> <p>SuatToraman , Talha BurakAlakus, úlbrahimT`urko` glu</p> <p>Chaos, Solitons and Fractals, 2020</p> <p>doi.org/10.1016/j.chaos.2020.110122</p>  |
| 19 | <p>COVID-CAPS: A Capsule Network-based Framework for Identification of COVID-19 cases from X-ray Images</p> <p>Parnian Afshar, Shahin Heidarian, FarnooshNaderkhani, Anastasia Oikonomou, Konstantinos N. Plataniotis, ArashMohammadi</p> <p>Pattern Recognition Letters,2020</p> <p>doi.org/10.1016/j.patrec.2020.09.010</p>  |
| 20 | <p>Application of deep learning for fast detection of COVID-19 in X-Rays using nCOVnet</p> <p>Harsh Panwar, P.K. Gupta, Mohammad Khubeb Siddiqui, Ruben Morales-Menendez, Vaishnavi Singh</p> <p>Chaos, Solitons and Fractals 138 (2020) 109944</p> <p>doi.org/10.1016/j.chaos.2020.109944</p>   |
| 21 | <p>Automated Detection and Forecasting of COVID-19 using Deep Learning Techniques: A Review</p> <p>Afshin Shoeibi, Marjane Khodatars, RoohallahAlizadehsani, NavidGhassemi, Mahboobeh Jafari, Parisa Moridian, Ali Khadem, Delaram Sadeghi, Sadiq Hussain, Assef Zare, Zahra Alizadeh Sani, JavadBazeli and FahimeKhozeimeh, Abbas Khosravi, Member, SaeidNahavandi, U. Rajendra Acharya, Peng Shi</p> <p>arXiv:2007.10785v3 [cs.LG] 27 Jul 2020</p> |

### Hinton et.al. NNs, ConvNNs

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| 22 | <p>ImageNet Classification with Deep Convolutional Neural Networks</p> <p>By Alex Krizhevsky, Ilya Sutskever, and <b>Geoffrey E. Hinton</b></p> <p>Communications of the acm   june 2017   vol. 60   no. 6, 84-90</p> |
| 23 | <p>Distilling the Knowledge in a Neural Network</p> <p><b>Geoffrey Hinton</b>, Oriol Vinyals, Jeff Dean</p> <p>arXiv:1503.02531v1 [stat.ML] 9 Mar 2015</p>  |
| 24 | <p>Imputer: Sequence Modelling via Imputation and Dynamic Programming</p>   |

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|    | William Chan, ChitwanSaharia, <b>Geoffrey Hinton</b> , Mohammad Norouzi, Navdeep Jaitly<br>arXiv:2002.08926v2 [eess.AS] 22 Apr 2020  |
| 25 | <b>Dropout: A Simple Way to Prevent Neural Networks from Overfitting</b> ,<br>Nitish Srivastava, <b>Georey Hinton</b> , Alex Krizhevsky, Ilya Sutskever, Ruslan Salakhutdinov<br>Journal of Machine Learning Research 15 (2014) 1929-1958    |
| 26 | <b>Detecting and Diagnosing Adversarial Images with Class-Conditional Capsule Reconstructions</b><br>Yao Qin, Nicholas Frosst, Sara Sabour, Colin Raffel, Garrison Cottrell, <b>Geoffrey Hinton</b><br>arXiv:1907.02957v1 [cs.LG] 5 Jul 2019 |

## Applications. CapsuleNets

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| 27 | <b>Perspective Vehicle License Plate Transformation using Deep Neural</b><br>K.B. Sathya, Srinivasan Vasuhi, V. Vaidehi<br>Procedia Computer Science 171 (2020) 1858–1867  |
| 28 | <b>A Convolutional Neural Network Based on a Capsule Network with Strong Generalization for Bearing Fault Diagnosis</b><br>Zhiyu Zhu 1, Gaoliang Peng 1 Yanhang Chen 1, Huijun Gao<br>Neurocomputing (2018),<br>doi.org/10.1016/j.neucom.2018.09.050 |

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| 29 | <a href="https://arxiv.org/abs/1710.09829">https://arxiv.org/abs/1710.09829</a>                   | Sara Sabour et al,<br>Dynamic Routing Between Capsules, November 2017           |
| 30 | <a href="https://openreview.net/forum?id=HJWLFgWRb">https://openreview.net/forum?id=HJWLFgWRb</a> | Geoffrey Hinton et al,<br>Matrix Capsules With EM Routing, March 2018,          |
| 31 | <a href="https://youtu.be/pPN8d0E3900">https://youtu.be/pPN8d0E3900</a>                           | Aurélien Geron<br>Capsule Networks tutorial                                     |
| 32 | <a href="https://youtu.be/rTawFwUvnLE">https://youtu.be/rTawFwUvnLE</a>                           | G E Hinton<br>What is wrong with convolutional neural nets?                     |
| 33 | <a href="https://youtu.be/N0ER1MC9cqM">https://youtu.be/N0ER1MC9cqM</a>                           | Geoffrey Hinton<br>Discusses His Latest Research and Future of AI<br>2021-01-07 |
| 34 | <a href="https://youtu.be/yhvxE1yNoA">https://youtu.be/yhvxE1yNoA</a>                             | Ahmad Kumar<br>Deep Learning 56: Capsule Networks Overview                      |
| 35 | <a href="https://youtu.be/ldfLjQKyv8I">https://youtu.be/ldfLjQKyv8I</a>                           | Ahmad Kumar<br>Deep Learning 57: Capsule Networks (Dynamic Routing Algorithm)   |
| 36 | <a href="https://youtu.be/1dIEyZuZui0">https://youtu.be/1dIEyZuZui0</a>                           | Ahmad Kumar<br>Deep Learning 58: Capsule Network Architecture Details           |
| 37 | <a href="https://youtu.be/nXGHJTtFYRU">https://youtu.be/nXGHJTtFYRU</a>                           | Yannic Kilcher<br>Dynamic Routing Between Capsules                              |
| 38 | <a href="https://youtu.be/pPN8d0E3900">https://youtu.be/pPN8d0E3900</a>                           | Aurélien Geron<br>Capsule Networks (CapsNets) – Tutorial                        |
| 39 | <a href="https://youtu.be/2Kawrd5szHE">https://youtu.be/2Kawrd5szHE</a>                           | Aurélien Geron<br>How to implement CapsNets using TensorFlow                    |
| 40 | <a href="https://youtu.be/YqazfBLLV4U">https://youtu.be/YqazfBLLV4U</a>                           | Capsule networks: overview  |

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|    |   | Dec 23, 2017, Calculation Consulting   |
| 41 | <a href="https://youtu.be/ZsbTwuE9R2A">https://youtu.be/ZsbTwuE9R2A</a>             | Capsule networks – introduction,<br>Jul 4, 2018                              |
| 42 | <a href="https://youtu.be/VKoLGnq15RM?t=200">https://youtu.be/VKoLGnq15RM?t=200</a> | Siraj Raval<br>Capsule Networks: An Improvement<br>to Convolutional Networks |

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| <p>! The singularity may not be near<br/>! But Neural Nets/ AI changed the world we live in<br/>! So, don't miss to pay attention</p> <p style="text-align: right;">Eye On I(ntelligence)</p> |
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| Information Source  | ACS.org ; sciencedirect.com  |
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| <p><b>K. Somasekhara Rao,</b><br/>Dept. of Chemistry,<br/>Acharya Nagarjuna Univ.,<br/>Dr. M.R.Appa Rao Campus,<br/>Nuzvid-521 201, India</p> | <p><b>R. Sambasiva Rao,</b><br/>School of Chemistry,<br/>Andhra University,<br/>Visakhapatnam 530 003, India</p> |